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BIRDS OF BRITISH GUIANA.—C. CHUBB.

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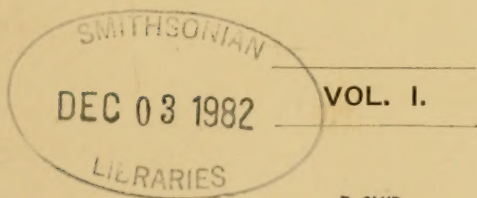
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THE BIRDS
OF
BRITISH GUIANA,

BASED ON THE COLLECTION OF
FREDERICK VAVASOUR McCONNELL,
CAMFIELD PLACE, HATFIELD, HERTS.

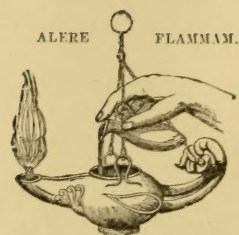
BY
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WITH
A PREFACE BY MRS. F. V. McCONNELL.



P. SLUD

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Samuel W. Hamer

PREFACE.

MY husband, Mr. F. V. McConnell, who spent some years in British Guiana, was deeply interested in ornithology, and made a fairly complete collection of the birds of the country. He also made two long excursions into the interior of the Colony, on both occasions visiting the far-famed Mountain Roraima. For some time previous to his death, he, with the assistance of Mr. Charles Chubb, of the Zoological Department of the British Museum, had been engaged on a catalogue of his collection. Since his death in 1914, wishing, in memory of my husband, to have some record of his work, I decided, instead of simply completing the catalogue, to ask Mr. Chubb to describe all the known birds of British Guiana, based chiefly on this collection.

I trust this book will prove useful to other workers in the same branch of natural history. The details of my husband's travels, with photographs of some of the places visited, which I have added, may perhaps give it a wider interest.

Helen Mackenzie McConnell

Camfield Place,
Hatfield, Herts.
April 24th, 1916.

ITINERARY.

EARLY in 1894 the Royal Agricultural Society of British Guiana decided to send an expedition into the savanna regions, which extend over the southern part of British Guiana, with the object of obtaining more information on the life and habits of the Indians and general appearance of the country in which they live, and also of ascending Roraima, a large table-mountain on the borders of British Guiana and Brazil, which has attracted special attention, not only from its extraordinary appearance, but from the fact that until a few years ago its summit had not been reached.

I was invited by Mr. Quelch, in whose hands the Society had placed the control of the expedition, to accompany him, and I gladly accepted his invitation.

We decided to start in the beginning of July, just before the end of the rainy season, so as to be able to call in at the Potaro, on our way up the Essequibo, and see the Kaieteur Falls in flood, and then reach the savanna at the beginning of the long dry season, when we might reasonably expect fine weather for our walk across to Roraima.

Before giving an account of our journey, it might be as well to mention that the chief rivers, which all run due north, are the Courantyne, Berbice, Demerara, and Essequibo, the last having two large tributaries—the Cuyuni and Mazaruni—which both enter from the west at Bartica Grove.

The Essequibo, the largest of these rivers, has a course of about 680 miles and a width at the mouth of 12 miles. Three or four large islands are situated near the mouth, and numerous smaller islands are met on the way up the river for the first 230 miles.

Both the Essequibo and Courantyne run the entire length of the Colony, rising in the Sierra Akarai.

In the report of Barrington Brown's survey the area of British Guiana is given as 88,000 sq. miles, of this 6500 are savannas and 3000 grass-covered mountain.

The land near the coast and for several miles inland is uniformly flat, and has been formed by a quite recent alluvial deposit from the large rivers; it is on the coast-line that the sugar-estates for which the Colony has long been famous are situated.

Immediately behind this is dense bush extending inland for some 200 miles. This bush at first covers dead-level country, intersected by numerous streams and creeks, and is monotonous in the extreme; the vegetation on all sides is most luxuriant, and for the greater part is so dense that it is impossible to penetrate without first cutting a path. After some fifty miles the land becomes hilly and even mountainous in parts; beyond this again comes the savanna district extending far

back into Brazil and Venezuela, with miles and miles of open country crossed here and there by mountain ranges.

Our plan was to follow the Essequibo for some 250 miles, and then the Rupununi, a large tributary which would take us first due west and then south—following the general run of all the other rivers—to Kwaimatta, a large Macusi settlement where we proposed to make our headquarters.

Our party consisted of A. Lennox, C. Lloyd, two taxidermists, a black cook, Quelch, and myself. Our crew, with two exceptions, were all Indians.

Our boats were four in number. Our own, the 'Victoria,' specially built for the occasion, 36 feet in length by 6 ft. 6 in., a small 20-foot boat to be used for carrying letters to Georgetown, and two boats borrowed from Waraputa Mission, near the Potaro mouth, which we required to take part of our provisions, &c., as far as the mission station, from which point they would be brought on from time to time by the despatch boat.

On July 7th we started from Georgetown for Bartica Grove, a small town used as a base of operations for the gold-diggings, and from here Quelch started on the 9th, while I went back to Georgetown with Lennox, leaving again the next day for the Demerara River and proceeding for three days by steamer to Kanaimapu, walked across by the Kumaparu path to the Essequibo, meeting Quelch above the first set of rapids.

The steamer-journey was very tedious, the river winding through thick bush, and the land being so low that it was impossible to see beyond the first line of trees. The first day the steamer took us to Akyma, another steamer took us the next day to Malali, where there is a small rapid avoided by a walk of about half a mile, and from there a third steamer took us on to Kanaimapu, where the first quartz-crushing plant in the Colony was erected; we here borrowed a boat, and after paddling for a couple of miles came to the Kumaparu path and started for the Essequibo.

The track, thirteen miles in length, was well cleared, and walking was easy. There were one or two steep little gullies to be crossed, and it surprised us to see that runners had been placed along the path for the transport of boats; the expense of laying these must have been very great, and a boat could be worth little at the end of such a journey.

We were late in starting, and did not reach the other end till next morning. There we found that the Essequibo had overflowed its banks for about two miles, and that we could not by any means reach the main stream—this put us out considerably. We expected to find Quelch waiting for us, and not finding him were afraid that the flood might have so altered the appearance of the river that the captain had not been able to make out the track; besides this, to make matters worse, we had sent back the boat to Kanaimapu, and had brought no provisions and cooking-utensils with us. Fortunately, one of our Indians shot a hog which kept us going, although hog cooked whole on top of a fire and eaten by itself is not appetizing.

This was a very bad start indeed, the uncertainty as to what had



become of Quelch was our greatest trouble. Several possibilities suggested themselves—he might be ill, the boat might have upset with all our belongings, or he might have looked for us higher up or lower down the river and, not finding us, returned to Bartica; but after two days' anxiety Lloyd arrived in the small boat, having been sent on ahead by Quelch to let us know he was coming on slowly. He arrived the next evening, having found the water much heavier than he expected, and having been also delayed by one of the mission boats, which leaked so badly that half a working day was spent in caulking her; she then upset while being hauled up one of the rapids, losing her paddles and one or two small items—fortunately all her cargo had been taken out to lighten her at the foot of the rapid, so no real harm was done.

We started early the next morning, and crossing the river met the other boats, which were waiting for us.

Camping-grounds were very scarce, and we had great difficulty in finding a convenient spot. High land was always chosen, but now all the usual camps made by gold-diggers on their way to the Potaro were under water, in some cases only the old ridge-poles, over which a tarpaulin had been thrown, remained in sight. On the second night we camped opposite the Potaro mouth, and reached the mission at Waraputa early the next afternoon.

On the following day, having lightened the 'Victoria,' we started with thirteen paddlers, captain, and bowman for the Kaieteur Falls on the Potaro. About six miles up the river we came to the Tumatumari Falls, round which the boat had to be hauled. In dry weather this fall is some thirty feet in height, but on this occasion the Essequibo had dammed back the water to such an extent that the drop was not more than ten feet.

A few miles above this is the Potaro landing; nearly all the richest gold-placers are in this district, and are practically all on the Mahdia creek, which runs into the Potaro above the next set of rapids; the store-houses for these placers are erected at this spot, the Potaro landing, and form quite a large settlement, almost equalling Bartica Grove in the number of sheds and store-houses, which are all roofed with bright red neponset, making an effect against the greenheart rising on the hill at the back which is very picturesque.

Although gold had been found for some time previously, it was not until 1884 that it was recognized by the general public and the Government that there was anything in it, and that it was worth looking after; but about this time they both seemed to realize the fact—the one by spending its money in prospections, the other by levying a royalty.

The rapid way in which the industry developed will be seen from the following figures, which show the amount of gold passed through the various gold offices:—

1884.	250 oz.	1888.	14,570 oz.	1892.	129,615 oz.
1885.	939 „	1889.	28,282 „	1893.	142,788 „
1886.	6518 „	1890.	62,615 „		
1887.	11,906 „	1891.	101,298 „		

Up to the present the gold-industry has done no good to the Colony, the majority of people having used any spare cash they had in sending up prospecting parties, very few of which paid their way; but although this money was lost by those who were anxious to be first in the field, others who come after will realize some benefit from the knowledge which has been gained by those first and generally unfortunate prospectors.

The following day we came to Kobanatok and Pakatuk, a long series of rapids extending over about four miles. The Gold Officer at Tumatumari kindly lent us a boat which he had lying above these falls, and had it not been for this, with the river in its swollen state, we should have been compelled to portage the 'Victoria' overland for the whole of this distance, which would have meant a delay of at least two days.

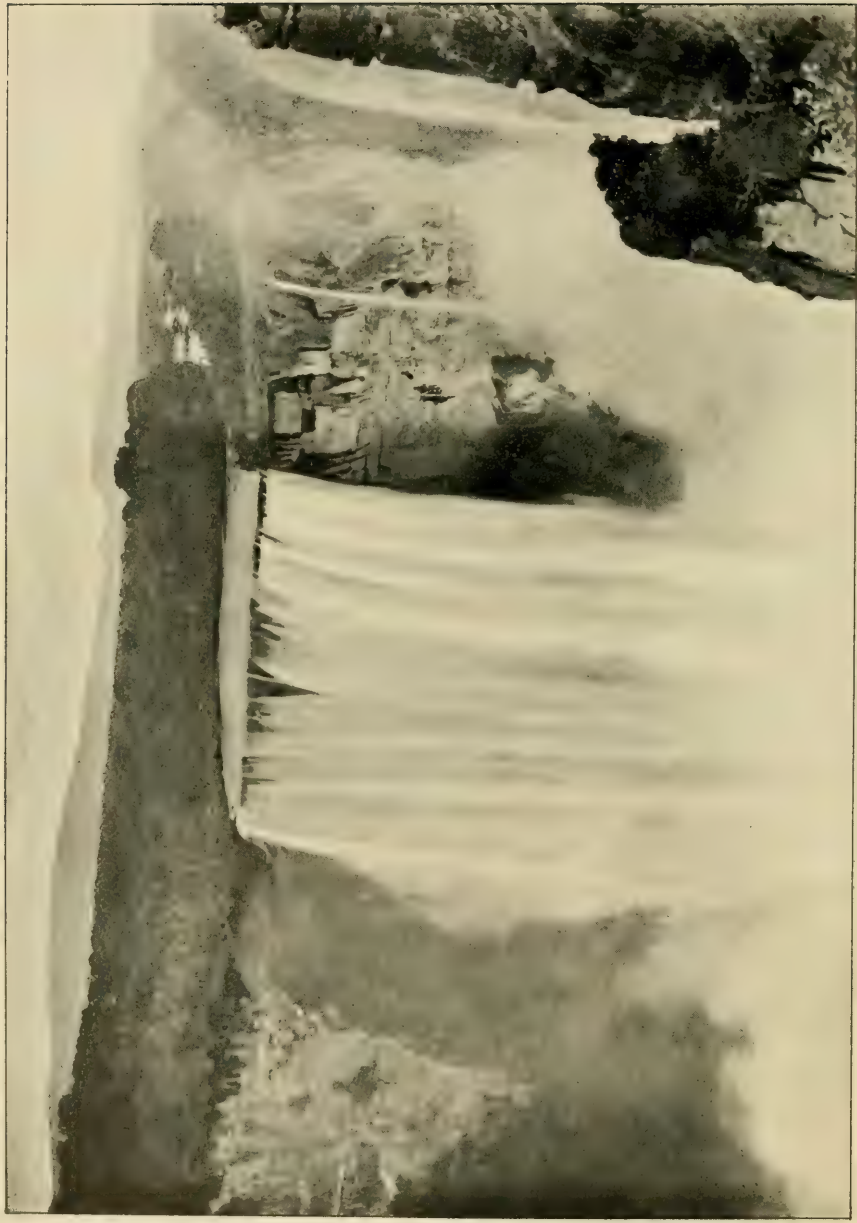
We next had to carry the boat round the Amatuk Falls for a distance of 440 yards; this portage made really hard work for over two hours. There was a steep hill to be tackled, with a cascade to be bridged over at the top; the strain on the boat was very severe, and we were an hour caulking her before she was fit to be put in the water again.

It was from just above these falls that the first view of Kaieteur was obtained. Away in the distance the upper part was visible for a few moments until a bend in the river obstructed the view. The scenery on all sides is magnificent, hills some 2000 feet in height, covered with dense bush, rise almost from the water's edge. One large square hill with almost perpendicular sides, reminded us of an old castle overgrown with ivy, large patches of rock showing through the green, and rounded turret-like corners making the illusion more complete.

Passing the Waratuk rapids we soon reached the foot of Tukeit Fall, which was to be our starting-point for Kaieteur. From the spot on which our camp was pitched we could see the fall and rapid just above us, and on the opposite bank a cascade, 200 feet in height, pouring down the mountain-side, between a dense growth of palms and forest-trees, while in the foreground ran the dark water of Potaro with long lines of white foam from the falls. Our tarpaulins stretched between the trees, and the figures of the Indians, in their hammocks or moving round the fires as the darkness came on, made a picture interesting and almost weird to one unaccustomed to bush-life.

The morning following, the 18th day after leaving Bartica Grove, we started for the fall. The path, after crossing a swiftly running stream, ascended the mountain, getting steeper and steeper as we advanced until the angle could not have been less than 60°—very trying to our legs after our boat-journey. At last we reached the top and found ourselves clear of the forest on a large plateau of conglomerate, hard as concrete, with large patches of *Brocchinia cordylinoides* growing everywhere—this plant, the leaves of which are 8 to 10 feet in length, being the most noticeable growth of any size on this part of the plateau.

After a short walk down a slight incline and cutting our way through the *Brocchinia* we arrived at the edge of the amphitheatre, which



KAIETEUR FALLS, POTARO RIVER.

had been formed during the course of years by the water, and found ourselves almost opposite the middle of the Kaieteur, on a level with its highest part. The sight is one never to be forgotten, and is one to which no description can ever do justice. At first it is difficult to grasp the real magnificence or to realize the proportions of the huge body of dark brown water 350 feet in width, turning amber-colour and then white as it rolls over a precipice with a sheer drop of 741 feet. Looking down from an overhanging rock one can see the water broken into spray before it reaches the bottom, which is hidden by a mist, and appearing where the sunlight touches like a shower of diamonds glistening with every colour of the rainbow; raising the eyes and looking beyond the fall the level plateau reaches for miles, and one can see the mountains which bound it rising in the blue distance.

The total height of the Kaieteur including the cataract is 840 feet, and the height of the top is 1130 feet above the sea.

We were unable to visit the pool below, and it was difficult to believe that what appeared to us as small moss-covered rocks were in reality 60 to 80 feet in height, while the "moss" was *Brocchinia* similar to that on the plateau. Unfortunately our limited supply of provisions had not been supplemented as we had expected by game, our hunters having been altogether unsuccessful, and fear of running short compelled us to make but too short a stay at this, one of the finest waterfalls in the world, and with many regrets we started on the return journey.

The fall was discovered by Barrington Brown while engaged in making a survey of the Colony in April 1870.

According to the legend, there lived an old Indian who for years had been a nuisance and a trial to his friends, but in spite of his great age he showed no signs of approaching death; they therefore decided to bring his affairs to a climax by floating him over the fall in a corial. After undergoing this penalty the old man was never heard of again, but his corial and the package containing his worldly possessions can still be seen in the form of rocks in the basin below. The name Kaieteur, which means "old man fall," was given after this.

The second night on our return journey we spent at Tumatumari, in the Gold Officer's quarters, and was the first night since we left Georgetown on which we had no rain. Previously we always had a heavy squall about camping-time, the hammocks never having been properly dry since starting.

An old woman, the wife of one of our crew, was considered to have some power over the weather, and whenever a cloud appeared she would wave her hands and mutter an incantation. If it passed away without any rain falling the self-satisfied smile with which she favoured us was worth seeing; her desperate attempts made at our request when we saw we were in for several hours' downpour were very amusing.

The two following days were spent at Waraputa re-arranging the loads, and, as we were not taking on the mission boats, we had to store about one-fourth of our packages at the mission.

On Wednesday, 1st August, we started for the savanna, taking

with us a large quantity of cassava, which had been ordered before we went up the Potaro. After a short pull we camped for the night a little below Paiwori Cairn, a large block of granite resting on a smaller in mid-stream, and so called from a supposed resemblance to a vessel used by the Indians for holding their favourite drink, Paiwori.

Two days were spent in getting over the Haiowa rapids. Islands large and small are scattered about here in great numbers; on one of them at breakfast-time we shot a Bushmaster (*Lachesis mutus*), the most deadly snake in the Colony, 5 feet 6½ inches long. It was lying coiled up on some dead leaves, which it so clearly resembled in colour that I had difficulty in seeing it when first pointed out to me; two or three men who had gone out hunting passed within a few feet and must have had a very narrow escape.

On the second day, when we came to the worst part of the rapid, the boat had to be lightened and hauled over for about 200 yards, the hauling and repacking, which had to be done very carefully, occupied everyone for three hours, and when we camped in the evening we estimated that we had not covered more than ten miles in the last 48 hours.

The next morning (Saturday) we reached the bottom of the Itanime rapids and started to tackle them on Monday. These were the most trying and irritating days on the whole journey; we had to leave the main river and take to a small itabo, or creek, having an entrance to the river both above and below the falls. Here we worked for over two days, and on the Wednesday, when we got back into the Essequibo itself, our captain pointed out the spot where we had camped on the Saturday night, not more than half a mile lower down.

Progress in these rapid waters was most tedious; the men were unable to use their paddles on account of the strength of the current, and we had to resort to monkey-jumping. The boat was made fast to a tree while a rope 20 or 25 yards in length was carried forward; this in itself was a difficult task, for it must be remembered that the banks were many feet under water and covered with trees and bushes. The men, having found a foothold on the branches, hauled on the rope, and after moving slowly for 20 yards the boat was again made fast, and this was repeated time after time and hour after hour until one's patience and temper were tried to the utmost. One man had to be continually in the bow of the boat clearing away branches, and at times large trees which had fallen across the water had to be cut through and pushed into the current. To make matters worse, five out of our thirteen paddlers were down with fever brought on by the continual rain and sleeping in damp hammocks; looking back it seems almost incredible that eight men should have hauled the boat against such a rush of water with five sick men, three women, two of our assistants, and Quelch, Lennox, and myself, besides about 3 tons of cargo—however, it was done, and on the Wednesday at breakfast-time we re-entered the Essequibo. Almost immediately we were obliged to take to another itabo to avoid the Takwari rapids, and once more had to start monkey-jumping. Emerging again into the river, we found that it had widened out considerably, and had the appearance of a large lake; directly on our right rose Kumuti Mountain, with

the Takwari rocks—three large greenstone columns springing from a single base—about halfway up the side. We made camp that afternoon at a small village, called Morsa after a creek on the opposite or left bank, and here we stayed for two days to rest the men after the hard work they had gone through. The thin walled houses were interesting to us, being built in the savanna style, and differed from those seen nearer the coast in having walls; in the bush there is no need for them as the breeze never penetrates the thick growth. These houses belonged to a family of Wapisianas who came from the savannas beyond the Kanuku Mountains.

In two days we arrived at Arinda on the left bank. In the time of the Dutch this had been an outpost kept up for the protection of the Indians, and afterwards became an Indian settlement—only finally abandoned a few days before our arrival.

The Kurupukarri Kuariwaka and Gold Falls, which we passed during the next three days, were hardly noticeable, except as a swift-running body of water. On one of the islands in the Gold Fall, where we all walked round to lighten the boat, I nearly stepped on a *Labarria*, a snake almost as deadly as a Bushmaster; but it never moved, and allowed me time to go back and bring my gun.

Just above the Gold Falls the men heard a Tapir whistling in the bush and, taking all the guns, started in pursuit; in about a quarter of an hour it took to the water twenty yards above the boat, but all the guns being ashore it crossed over to the other side in safety. Game was not plentiful along the banks, but the men, a few of whom used to hunt each morning while breakfast was being prepared, always managed to find something, either hog, or Agouti, or a game-bird. We were not able to do much in the way of collecting from the boat, birds not being in any number or variety. Macaws flew over at a great height, screaming as they passed, and could be heard long after they had disappeared; large grey Kingfishers (*Megaceryle torquata*) and the pretty little Red-headed Fall-bird (*Paroaria gularis*) used to fly along in front of the boat, and a few Hawks could be seen sitting on the top-most branches well out of range. Large flocks of various Parrakeets passed over at a great pace level with the tree-tops, and Toucans, generally three or four at a time, flew clumsily over, generally low down by the time they reach the opposite bank—sometimes they fell into the water where the river is wide, their strength having failed them.

On one tree, which was in flower, we shot several small Creepers in a few minutes; they apparently did not mind the discharge of the gun, but continued buzzing round the flowers until we had secured as many as we wanted.

The next important land-mark was on our left, the Makari Mountains, where the Demerara River rises; this range is continued across the Essequibo, and running in a south-westerly direction is terminated by Makarapan—a large mountain 5000 feet in height on the north bank of the Rupumuni. A little way on is the village of Simang, on a small island; here we stopped to enquire for provisions, but the people seemed very badly off and could spare none.

The Pisham Pisham rapids were passed very quickly by the aid

of back currents under the left bank, but in the afternoon the water was very heavy against us and we made little progress, although we took a very circuitous route among the small islands, of which there were a large number.

At Akaramukra the river opens out to about five miles in width, but numerous large rounded masses of granite and islands prevent any view of the full extent of the water. The birds which I have mentioned as being the commonest along the river disappeared almost entirely at this wide part of the river, their place being taken by Scissor-bills, Sandpipers, and Terns, which are usually found either on the mud-flats of the coast or on the sand-banks in the rivers running through the savanna country.

After the Rappu or Bamboo rapids the river makes a considerable bend, running for a short distance E.N.E., giving us a good view of the continuation of the Makari range and Makarapan ahead of us. Since passing the Makari range on the E, the banks on both sides of the river had been very low and the bush much poorer, consisting of small trees and cocorite and sowarri palms, and at times we had great difficulty in finding any ground for camping, the water being dammed back to a great extent by the falls; on our return journey, when the heavy water had all drained off, the banks showed 20 or 30 feet above the river. In two days more we reached the Rupununi mouth, and camped there for three days for a rest before sending the despatch boat back to the coast with letters, and to bring up some of our supplies from Waraputa.

During our stay I went with Quelch about two miles higher up the Essequibo to look for an old Indian village called Apoteri, and after some little trouble we found the site, only distinguishable by the second forest-growth; but all traces of the houses had disappeared, and the place was so overgrown with prickly vines that we were glad to return to the boat. On the way back we shot an Osprey, the only specimen obtained on the trip.

A Carib was living about two miles back from our camp, and from him we bought some provisions; he also lent our hunters a dog, and they managed to kill a large Deer and two wild hog, for which we were very thankful, fresh meat for the men being very difficult to obtain. We were told that he had killed one of his own tribe and was staying here for safety.

The mosquitos and sand-flies, both by night and day, were almost maddening, sleep being quite out of the question. We had also during the last few days been troubled by a small black fly called Cabouroo, which leaves a minute blood-blister wherever it attacks. Three different species of stingless bees were also very troublesome, buzzing about the eyes and nose, refusing to go when brushed on one side. With three sleepless days and nights we had, I think, our worst experiences at this camp.

Having repacked everything into the 'Victoria' and started the little boat back to Bartica, we pushed on up the Rupununi and called in at the two villages, Simeri and Makapa, near the mouth, the latter of which only had one house standing out of what was once a large settlement. A single house a mile farther on, at a place called Sekwe,

belonged to a half-bred Brazilian. We stayed there for a couple of hours for breakfast; the house was neatly kept, and a few guava, tamarind, mango, and coco-nut trees had been planted and were doing well. From a little distance farther on we could see the whole of the eastern spur of Makarapan; both the east and west spurs come well to the south of the main part of the mountain, sending the Rupununi in each case out of its easterly course round three sides of a square. At the first of these bends the Kwitaro or Rewa, a large tributary, which has its source almost as far south as that of the Essequibo, enters. About half a mile up this river is an Atarai settlement, where we passed the night; the daughter of the head man was the biggest woman we met, about 5 ft. 10 in. or 5 ft. 11 in. in height, and Dutch built—a sister who died a short time before was even bigger. After buying a large quantity of provisions and smoked meat we made another start, and after a short day's work had to camp again for a day, all our crew either having fever or being still weak from the effects of a late attack, not a single man having entirely escaped. During one day's rest we walked some distance round the camp, but saw nothing of interest: the bush was low and quite free from undergrowth, and the ground covered with small ironstone pebbles; the banks of the river were 20 or 30 feet high in some parts, and most uninteresting. We saw no signs of life, with the exception of a very large frog, which we added to our collection, and, of course, thousands of Cabouroo flies, which nearly drove us wild when we made an attempt to bathe.

Another two days brought us to Annai, a village surrounded by hills in a fertile district on the left bank, but, as there was a considerable depth of swamp to pass, we did not call in on this occasion. Wild pines grew in great profusion on the banks and were eagerly gathered by all hands, none of us having tasted fresh fruit of any kind since leaving Georgetown. After leaving Annai, our course lay south and continued in this direction parallel to the Essequibo.

Mosquitos again began to be troublesome after the sun went down, and for the following two nights we paddled on in the moon-light, which was so clear that we were able to read without difficulty, and camped during the day until about 4 o'clock in the afternoon.

We arrived at the landing of Kwaimatta late in the evening of 6th September, sixty-one days after leaving Georgetown, and camped on the bank, which was only two or three inches above the river.

The following morning we had to go a little distance farther up an itabo, through which the water was running with great force, in order to reach the path leading to the village, and here we all disembarked for the last time, heartily glad that the first tedious stage of our journey was over.

The path, which is all fine white sand, runs at first through low bush, not more than 40 feet in height, for about two miles; a short distance from the river is a clearing in which a few houses have been erected, one of which belonged to a black trader who used to do a large business in hammocks, giving in exchange cloth, beads, knives, or powder and shot. After leaving the bush the village was seen half a mile farther on a slight rising in the open savanna.

For the last eight or nine weeks we had been cramped in a boat, shut in with thick bush, never able to see farther than the river-banks on either side, and, with the exception of the occasion on which we went to the Kaieleur and also when we took a short stroll through the open bush near the mouth of the Rupununi, had not been able to stretch our legs since our start; but here the prospect was most exhilarating—for miles round we could see open country covered with grass still bright green after the recent rainy season, and the feeling of relief made us forget our past troubles, and we realized that our long boat-journey with all its discomforts had not been made without some compensation at the end. Looking west as far as the eye could see lay level savannas, with here and there a clump of Ecta palms, stretching away into the distance far beyond the Takutu into Brazil; to the north another stretch of savanna, with Ecta palms and groves of wild Cashew and knarled and twisted Curatellas dotted about, was bounded at a distance of ten miles by the mountains of Irewang. Kwaonga, Warushee, Mova, and Annai part the large group of Pacaraima, which extends as far north as the Potaro and from the Cotinga to the Essequibo; to the south the Kanuku Mountains rise from the savanna some thirty miles away, and form the boundary in that direction of the Macusi country.

The village consisted of a large building called the church surrounded by thirty-eight houses and sheds in a circle at a radius of about 60 to 80 yards; only eighteen of these were regularly inhabited, and the population actually belonging to the place was about 200.

The chief placed at our disposal two houses which had been built for the parson when he visited the savanna from Waraputa about a year before—both houses were raised from the ground and were thatched with cocorite leaves. One, which was divided into rooms, had walls and a floor of split manicole palm-stems placed an inch apart; the other was simply a floor with a roof raised on uprights. We selected the latter as a residence, and decided to use the former as a store-house for provisions and barter.

All the other houses in the village were built after the same model: the sides were parallel with semicircular ends; the walls, 5 feet in height, were made of wattle covered with clay; and the high sloping roofs, thickly thatched with cocorite leaves, projected well over on all sides. There were no windows, and the only light entered through a low doorway seldom more than two feet across. The doorways, of which there were sometimes two—one at each end,—were barricaded at night to keep out evil spirits.

On our way up from the river we had met over 100 people, who, having heard our guns the previous evening, had come down to meet us; these now began to return laden with our boxes and other packages from the boat, and before noon everything was arranged to our satisfaction in the two houses.

During our stay at Kwaimatta, which extended altogether over eight weeks, we had a very favourable opportunity of observing the habits of the Macusis. The men whom we had had with us in the boat probably gave a favourable report of us to the others, as from the very beginning everyone was friendly and anxious to get on well with us.

The first thing that struck us was the inconvenience of the site selected for the village—in fact, there was nothing to recommend it except the openness of the situation, which, after all, is little recommendation to an Indian; and yet the people seemed to fancy the spot, Kwaimatta being the largest village in the savannas. The land round about was all sand or very sandy clay, and would grow nothing but cassava, and that not very plentifully. All other provisions, such as yams, plantains, bananas, and sweet potatoes, were grown on the hills at the back of Annai, and a trip to the fields and back meant three days' work. The long straight poles and palm-leaves used in building the houses had to be brought from a place higher up the river, as far as the Kanuku Mountains, and the return journey would take five or six days, and many trips would have to be made before sufficient leaves to make one of these high-roofed houses could be collected.

The water-supply is perhaps the worst feature. At the foot of the incline on which the village is built is a particularly dirty swamp; in this a few shallow pools, about 6 ft. square and 1 ft. in depth, are dug, and the water which finds its way into these is the only water easily obtainable. One objection to these pools is that the people bathe in them, and as in the dry season the water is never changed, the idea, if nothing else, is unpleasant. At first we used this water for drinking-purposes, but after a fortnight's dry weather, when the mixture became more concentrated, we began to feel the ill-effects and were obliged to send to the river every morning and evening, a distance of two and a half miles.

The natural laziness of the people—or, rather, dislike to any work which is not absolutely necessary—makes it difficult to understand why such a site was chosen. After the ground has once been cleared by the men, the women have full charge of the fields, and all the produce belongs to them. A man may take one or more wives whom he treats very much as beasts of burden; it is their duty to keep the fields clean, bring home the cassava, and make bread. When travelling she carries the load and the man walks in front with his gun or bow and arrow; but the hunting gives him plenty of work, as a shooting-expedition may mean watching and walking for a couple of days without result. Most men use a gun when hunting; they never fire at a moving object or run the risk of wasting powder and shot, but walk stealthily through the bush listening for the slightest sound. When satisfied that they are close to anything worth shooting, they either stalk it to within two or three yards before firing or, hiding behind a tree, call the game to them. I have seen an agouti (a thick-skinned little animal the size of a hare) shot through from side to side. This will give some idea of the short range to which it was stalked.

Arrows are seldom used, except for shooting fish. The bows are made as a rule of letter-wood and have very little spring; the arrows are very light, being made from the flowering stalk of the wild sugar-cane, and have a point either of iron or some hard wood.

At some target practice we started one day, we were surprised to find that the strongest men could seldom send an arrow more than 60 yards, even when they allowed a fair elevation.

The blow-pipe, which appears to be fast giving place to the gun, is

a very deadly weapon for birds; it consists of a hollow reed ten or twelve feet in length without a joint—they are very difficult to obtain, only growing in one district near the Orinoco. This reed is fixed into a hollow stem to strengthen and preserve it from being bent, a sight of two agouti teeth set in wax is fixed near the end. Great care is taken when the blow-pipe is put away, it being either hung up by one end or, if placed horizontally, two or three supports are placed under it so as to distribute the weight and thus prevent it from drooping in the middle and losing the straight line. The arrows, about a foot in length, are made of the tough mid-rib of a leta-palm leaf and are carried in a waterproof quiver.

When preparing an arrow for use, a small amount of brouvali poison is smeared on to the tip and a piece of raw cotton wrapped round the other end, so as to fill the whole diameter of the pipe and catch the full force of the puff which propels it. The arrows carry a fair distance, and it is no trouble to the Indians to bring down Macaws and Parrots from the tops of the leta and cocorite palms, the bird only flying a few yards before falling to the ground and apparently losing all desire to move—in a few moments the muscles relax and lose their power, and death shortly afterwards follows.

This poison is chiefly made by the Macusis, and as we were in their country and were fortunate enough to make friends with one of the men who understood its manufacture, we were able to gather a little information about it.

The chief ingredient is the Wourali, a bush-rape growing to the tops of the trees in the Kanuku Mountains; it was not in flower at the time of our visit and no one could tell us what the flower was like. The leaves are in pairs and 4 to 5 inches long, with five deep veins. The leaf and leaf-stalk are conspicuous from the large quantity of sand-red hair with which they are covered; there appears to be little doubt that it is *strychnos*. The stem was about forty inches in girth, and it is the bark of this which is used. There are six other ingredients used, three very similar in growth to the Wourali, and are supposed to belong to the same genus, a species of cactus, and two other plants; no snakes' fangs or ants, as usually reported, are used in the concoction. Special observances have to be made before the piaman can begin his work; he must eat sparingly for a month, and on no account take anything sweet—the piaman told us that if he was not hungry when preparing the poison, the poison would not be hungry for its work when made. He must also wait for a certain quarter of the moon and drink tobacco-water at intervals; but the greatest trial of all is having to sleep in the bush by himself, as the poison would be spoilt by anyone approaching during its preparation. When finished it is kept in small gourds, a small quantity being in the bottom of each, and lasts for a long time if kept dry. In appearance it is not unlike blackish toffee.

I was very disappointed with the piaman, having always had the impression that, being looked on as a magician, he would be treated with a great amount of respect, but he seemed to be more pitied for having to deprive himself of the good things of this world than respected, and from his appearance he did not seem to be in a very

flourishing condition. Besides making brouvali, he is also supposed to have power over evil spirits, and on one occasion, when a child was ill at Kwaimatta, our friend was sent for, and we had the pleasure of hearing him make horrible noises in his throat and shake a rattle all night, with the object of driving away the malignant spirit.

There seems to be no religion amongst these people, with the exception of a belief in evil spirits called Kanaima, and these are generally to be frightened away by shouting or by any loud noise. The people are apparently continually seeing them, generally about dusk, and it was by no means an uncommon occurrence just after the sun had gone down to see a stampede from one of the houses; on making enquiries we would be told that a Kanaima had appeared, and the only other information forthcoming would be that it had the form of a man. On one occasion I remember the people moving from one corner of the village suddenly: we asked the reason, and were told that several Kanaimas were walking up and down a little way in the savanna, and that one woman had actually been seized by the elbows from behind. A curious feature is that these apparitions are seen by many people at the same time. We used to chaff the people and tell them we wished to catch one, but we never succeeded in obtaining a specimen for our collection.

Any illness or bad luck is put down to a visit from a Kanaima, and they imagine that a piainman blowing on them will help to put things straight again. While coming up in the boat, one of our party was down with fever, and it was proposed that the oldest man in the company should blow on him for luck.

A superstition or custom worthy of mention is that of lacerating their bodies or otherwise causing pain to bring luck in hunting or fishing: six or eight cuts down the thigh and calf of the leg, deep enough to leave a scar for life, are supposed to bring luck in fishing. While on our return journey one woman used to fish with a continual lack of success; this was ascribed to want of luck rather than to the flooded state of the river, and Simon, the old man of the party, was called upon to cut her in the manner described. Similar cuts on the arms and chest bring luck in shooting game-birds.

Another charm, the Nose Bena, is made from the leta-palm fibre, plaited to a fine point at one end and loose at the other, the whole being about two feet in length and as thick as a lead-pencil. This is passed up the nose into the back of the throat and pulled rapidly through the mouth. We saw one man perform this operation apparently without pain, and he was amused at our expressing surprise. Different substances rubbed on this bena bring luck in hunting different game—for instance, a small ground-nut is the charm for deer and a leaf, not unlike a small caladium, for tapir.

Probably the worst bena is that to which a beginner is subjected. A large number of manourie ants are fixed between thin strips of reed in such a way that they cannot escape, but are still able to sting: they are then applied either to the back or chest. The pain must be excruciating, the stings being very long and poisonous, and in some cases one is sufficient to bring on an attack of fever.

The Indians are close observers of nature—every insect, fish, or plant

being known by name; but, curiously, they seldom use any remedy for sickness. This may be due to the fact that they ascribe all illnesses to Kanaima, in which case medicine would have no effect. During our stay we only saw one native remedy used, and this was applied unwillingly, after a firm request from Quelch, for a skin disease not unlike ringworm in appearance.

If a man is ill he lies in his hammock, and little notice is taken of him—in some cases which came under our notice he was not even fed. When worse and near dying, he is left absolutely alone and then buried by his relatives; if he is friendless he is often left unburied lying in his hammock.

A short time ago a large tree at Waraputa fell down and injured a man, holding him down to the ground, and, although this was in the middle of the village and in broad daylight, no one came to his assistance until noon the next day; he was still alive when taken up, but died two hours afterwards. This gives some idea of the unsympathetic nature of the people with whom we had to deal, and the difficulty we experienced in ingratiating ourselves into their favour, so as to persuade them to accompany us through the district belonging to a tribe with whom they had no friendly relations on our way to Roraima—their wants being so small, offers of pay had little effect in inducing them to work for us.

There is a strange religious mania—or, rather, mania for going to church—all over this part of the savanna, but any kind of performance given in the church satisfies the people. About ten days after our arrival, an Arecuna named Bagot, who had lived at Bartica for some time and could speak English well, appeared on the scene and proceeded to hold service; he would ring a bell and assemble the people several times a day, and repeat the alphabet over and over again, perhaps twenty times. Nearly everyone would be there, the old chief especially being a regular attendant, taking with him a prayer-book which he could not read, and Bagot, who did not know one letter from another, would turn over the pages pretending to show him the part of the service then being performed. The game was a paying one, for when he left he took a goodly number of hammocks and lived free in the chief's house during his stay.

We stayed at Kwaimatta nearly six weeks before starting for Roraima, waiting for the return of the despatch boat with letters, and trying to get on intimate terms with the people. During this time we were unable to make any small trips to the Kanuku Mountains and the Takutu, as we had previously arranged, owing to the flooded state of the savannas; the water was also too high to allow us to look for arapaima or cayman, of which we were anxious to secure specimens.

When we had been at the village a few days, about a dozen Arecunas arrived from Roraima, and informed us that, hearing we were anxious to go to their part of the country, they had come to escort us. It was a mystery to us how they could have received this information, as their home was nine days' fast walking from Kwaimatta, but news travels quickly by some unknown means in the savannas. It was impossible for us to start then, and we were obliged to tell them to return in a month, so after examining our barter and expressing their satis-



faction they left, intending to stay in the meantime at Irewang, a small village under the Takutu hills, a day's journey to the north-west of Kwaimatta; before they left we bought two hammocks from them in exchange for white salt, a great luxury to them, the only substitute which they were able to obtain for themselves being very inferior stuff from some swamp in the savanna.

Very little of interest happened during our stay at the village. We were out the greater part of each day with our guns looking for birds, and in the end succeeded in obtaining a very fair collection. One of our favourite walks after the water had dried off a little from the surrounding country was down to a large pond or *keeriha* about three miles from the village. Trees, on which were a large number of orchids, particularly the *Cattelya superba*, grew thickly on all sides, but a path ran round for the convenience of fishing. One end of the water was thickly covered with *Victoria regia*, the gigantic water-lily, and on these we shot several water-birds—Tiger-Bitterns, Night-Herons, Bronze Curry Curry; and in a swamp at one end the rushes and flats were alive with Snipe, Plover, and Ducks. We also obtained specimens of the three larger Ibises and the small *Ardetta*. Large alligators, 10 to 12 feet in length, were very common, and of these later on we obtained several specimens.

At the end of the month the Arecunas returned as they had promised, but unfortunately we were again obliged to keep them waiting while we wrote letters and prepared the little boat, which had just arrived from town, for the return journey; she had taken 40 days in going from the mouth of the Rupununi to Georgetown and back to Kwaimatta. Some delay was caused in repairing her at Bartica Grove after an accident in the Itanime rapid, in which she upset, losing a gun, all the cooking-utensils, and a few small things belonging to the crew, besides having the gunwale of one side ripped off against a rock on a narrow part of the channel.

Two days more were spent in arranging for the start and dividing our provisions and other necessities into suitable loads for the bearers, but unfortunately everything did not run so smoothly as expected. The foul drinking-water proved too much for the Arecunas, and on the day on which we should have started only five were able to turn out of their hammocks, the others being laid up with fever and diarrhoea. The Macusis whom we had engaged from Kwaimatta and one or two small settlements near at hand began to show signs of impatience, and it seemed that a general strike was imminent; they had never been anxious to go, and it had taken much argument and promises of good pay to persuade them to entertain the idea at all. There was the superstitious dread of the mountain to which we were bound, and also the fear of the Arecunas with whom they were not friendly and through whose territory we had to pass, and very little would have made them change their minds. At last it was decided that the only way to restore order was for us to separate, and that I should go on together with Lennox and the Macusis to the Karoma Falls on the Ireng, and there await Quelch, who was to start in two days' time. He had hoped that this interval would have given the sick men time to recover, but he was again destined to be

disappointed, and at the last moment was hard pressed to find sufficient bearers.

Our large provisions—namely, rice, flour, salt, and sugar—had all been hermetically sealed in kerosene-tins, and weighed between 36 and 46 pounds each. These and our own personal supplies—such as cocoa, milk, tinned soups, and butter—were packed into baskets and carried on the backs of our bearers, who seemed to care little with what weight they started; the average load was not less than 50 lb., and, in addition, each man carried either a hatchet or cutlass and his hammock.

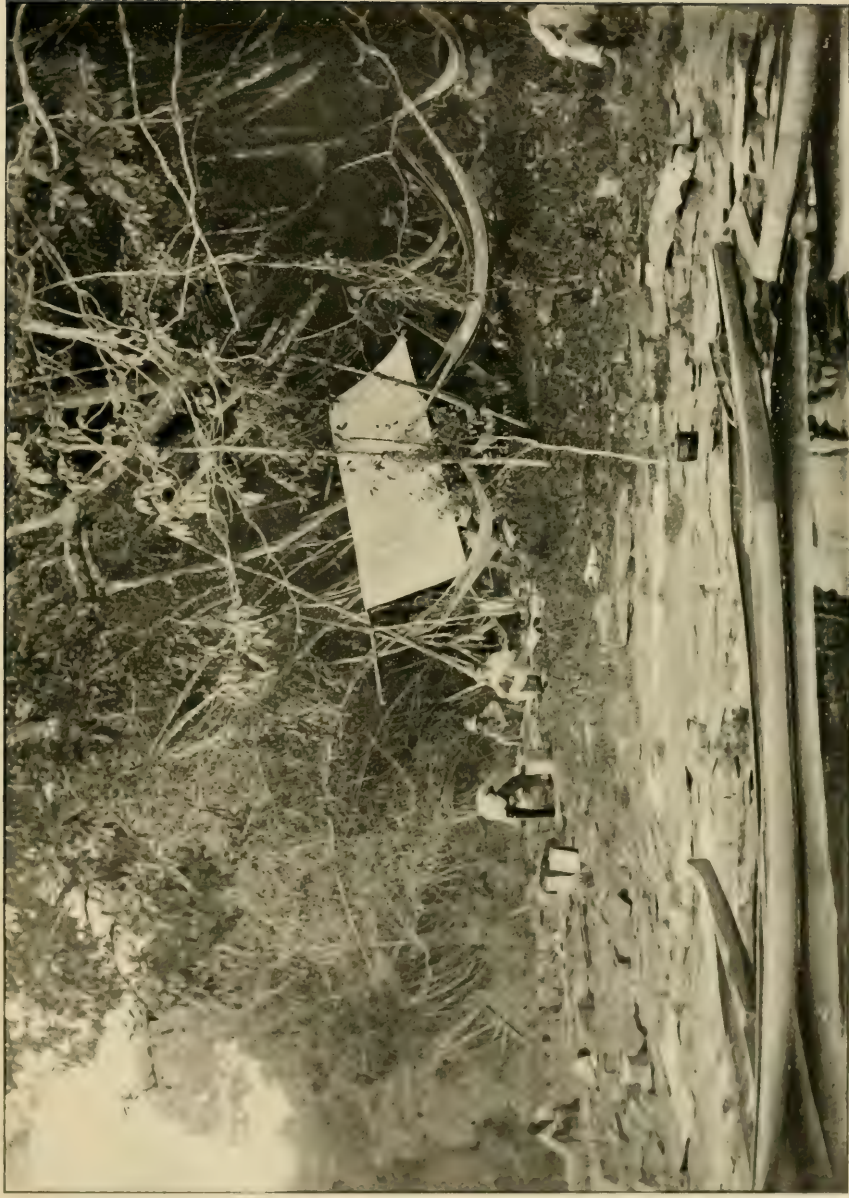
There was some discussion as to the route to be taken: the Arecunas wished to start westwards as soon as possible, passing south of the Pakaraima Range and across the Cotinga into their own country; while, on the other hand, the Macusis wished to keep as long as they could in their country to the east of this river, crossing eventually high up, almost level with Roraima, at Orindouk. Apparently a compromise was arranged and a middle course taken, which led us across every possible mountain-range and over the roughest country imaginable.

Everything having been amicably arranged, we started on the 16th October. Two clergymen, who had arrived in the savannas a few days previously to report on the advisability of re-opening the mission, which had existed in these parts some years since, agreed to accompany us as far as Warushi, the first large village on our route—Mr. Pringle starting with the first detachment and Mr. Dorset waiting for Quelch.

Our route at first lay in a north-west direction, across the level savanna and over the Benoni creek towards a pass in the Pakaraima Mountains. I knew that I was not yet in condition for long walks, but I was surprised to find what great difficulty I had in keeping up with the bearers, who, in single file, covered one mile after another at a jog-trot, carrying their loads without appearing to be inconvenienced by them in the least.

The Pakaraima is a large group of mountains, consisting of several small ranges divided from each other by level savannas. The group includes all mountains south of a line drawn from the Potaro to Roraima, between the Essequibo and Cotinga, as far south as the hills of Annai and Irewang. The mountains are, generally speaking, rounded in shape and covered with boulders of quartz-porphry, which make walking difficult, especially when they have become overgrown by rank grass. It is curious to notice that some of the hills are quite destitute of trees, while others are thickly covered; perhaps in the middle of a short range of wooded hills one will be quite bare, or *vice versa*; we could find no apparent reason for this.

At the foot of Mt. Pareeping, in the first savanna to which we came after entering the pass, is a curious mound of white quartz, oval and perfectly regular in shape, some 40 or 50 yards in length by 25 in width, and about 30 feet in height, standing quite alone in the middle of this small savanna, on which no quartz or other rock is visible. At first we thought it might be artificial, but, after a short examination on our way back, we came to no conclusion; some of the



OUR CAMP AT THE MOUTH OF THE ARUPARU RIVER.

blocks of which it was formed could not have weighed less than 1500 lbs.

After two days' walking alternately across bare hills and two or three small rivers and savannas, we started on the third day through thick bush, and after six miles of continually rising ground, arrived at Warushi, the second largest village in the district.

The parson was expected, and people from other villages round had assembled to meet him. I had walked on two or three miles ahead of him, and when I emerged from the bush and came suddenly on the village, I found over 500 men, women, and children drawn up in single line along the path. I was right on them before I saw them, and there was no escaping—I had to shake hands with all. I had injured a finger and was wearing a sling for my right arm, but this made no difference—I was regularly mobbed, both hands going at once, I told them I was not the parson, but that he was not far off, this, however, made no difference—they either did not believe me or did not care; I had to go right along, first girls, then boys and women, and, lastly, the men. When I had finished I was at the entrance to the church, and there I took refuge by sitting in a corner. When the parson and Lennox arrived they had to go through the same performance, but the enthusiasm had to a great extent worn off. When they had got over it we went into the house which the people had just built for the parson; the men and women then began to bring their presents for him, some a few yams, others sweet potatoes, plantains, cassava, and other vegetables, and soon there was a large pile in one corner of the house.

It was rather embarrassing at first to receive these presents, as the Indians had no word, as far so we knew, to express "thanks." When anything is given to them they walk away without a word of acknowledgment or even a nod, but to us it was embarrassing to receive gifts and in return to only point to the corner where we wished the things placed.

The village is one of the most prettily situated of any we saw. A clearing had been made for the houses on a wide ledge on the side of a hill, at the foot of which runs the Yurora River. From the village there is a splendid view to the north-east of the little valley, steep mountains thickly clothed with forest, rising on either side, terminated by a big hill called Arawanaroo, where the Yurora takes its rise. The village was quite new, and had replaced Kwaonga which used to be on the summit of a neighbouring hill.

Lennox was laid up the next day and unable to proceed. We therefore decided that I should push on, leaving him to follow with Quelch, if it was possible for him to do so; so after buying cassava and ordering more to be ready for Quelch, I continued, leaving Lennox in care of the Rev. F. S. Pringle. On the second day we passed a tiny village, known as Sakonmay-bung-bung, on the summit of a hill of white quartz, and walking for two hours in the valley of the Karabiekura, came to the Tipuru River near its junction with the Ireng, crossing at a shallow part; another two miles brought us to the left bank of the Ireng, running in a southerly direction. This river, also called Maku, rises about 40 miles east of Koraima, and enters the Takutu about 40 miles

higher than the Cotinga, to which it runs, more or less parallel, in a direction a little east of south. Walking up the east bank, over loose white sand and smooth water-worn rocks, we reached the Karona Falls, and there slung our hammocks to await Quelch.

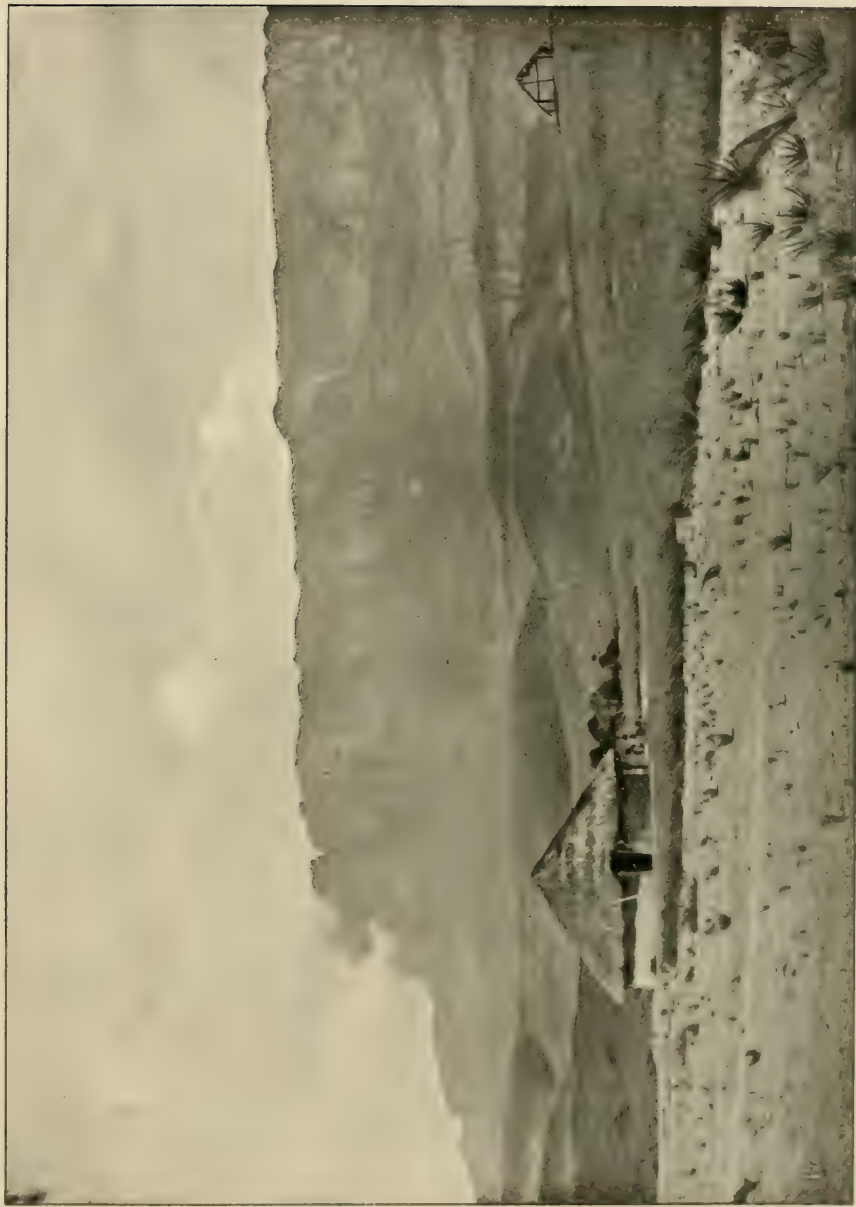
The Karona Falls are, I think, without exception, the most beautiful sight I have ever seen, perfect in every respect. Viewed from our camp, which was on the edge of a large area of level rock, we saw on our left the main body of the river, which widens to some 200 yards, falling over a mass of rock to a depth of 85 feet. At the very edge, withstanding the fearful current, is a tiny rocky island with low bush and a few palms—round this the water, seething into foam, rushes with tremendous speed, roaring and breaking into spray as it rolls over the precipice; straight in front of us the smaller body of water forces itself through a narrow gorge, of which the perpendicular walls are twenty feet in height above the water. In the middle of this gorge and confined within these walls the water makes its drop, the foaming mass at the foot boiling and spurting like a huge cauldron. Lower down these waters all unite, but are immediately separated by a large island, and on both sides of this the water continues, still on an incline, for half a mile or more, and then, uniting again, flows on to join the Takutu; directly behind the falls are hills luxuriantly covered with palms and forest-growth, and between them the waters of the Ireng flow quietly, forming a remarkable contrast to the scene below. The green hills as background, the black rocks and foaming water, with a clear blue sky above and the brilliant sunshine over all, made a view one could watch for hours, and the three days I spent here, fishing and strolling about waiting for Quelch, I look back on as the most enjoyable part of the trip.

The men I had with me not understanding the fishing in this water, I had taken the precaution of bringing two men from Sakonmay-bungbung who were accustomed to the place. These men crossed over to a small rock at the foot of the fall and fished in the roughest part of the current with a thick cotton cord, at the end of which was a huge hook baited with fish. When the bait was taken the line was seized in both hands and a pull given sufficient to take the head off any ordinary fish; no play was allowed, but the fish were hauled in hand over hand and knocked on the head. The first one brought in was scaleless and flat-headed, of a blackish colour, and was called by the Indians "Cuma quema." I had no means of weighing it, but it measured 59 inches in length and 44 inches round the body. The people were very amused at the idea of measuring a fish, and looked upon the steel tape-measure, which rolled up with a spring, as a most mysterious object; they were also very puzzled by my camera, which I produced here for the first time. After a good deal of persuasion, I managed to induce one man to put his head under the velvet cloth and look on the focussing-glass. He was so pleased at seeing me walking about upside down when I moved to the front of the camera, that he called all the others in turn to have a look, and waved me back each time I moved out of the picture; after this there was always some one anxious to have a peep when I was taking a photograph.

BIRDS OF BRITISH GUIANA.



SOUTH-WEST FACE OF MOUNT RORAIMA.



The men were very successful in fishing, and we soon had a few hundred pounds of fish drying in the smoke on the babricots. One fish called biara, which was very plentiful, is as good as any in the Colony. The lower jaw is provided with two very long sharp teeth, which fit into sockets in the upper jaw and show their tips through the skin just under the eyes. The tiger fish was also common, of a leaden colour, striped with black. The biara, when hooked, would jump six feet at a time as they felt the jerks when being hauled in by main force hand over hand. The men have no idea of sport, their sole object being to obtain food; in fishing the strongest line possible is used, and in shooting they never fire when there is any chance of a miss. When we missed a difficult shot they considered it quite as contemptible as though we had missed a bird sitting ten yards off, their opinion being that we would not have fired unless certain of killing.

Game was very scarce at Karona, and the huntsmen were unable to find anything. I went out with the gun and could not even see a small bird, but just before reaching the camp on my return I shot a large brown monkey, one of a flock of which he must have been chief, as he was very old with grey whiskers; however, he was much appreciated by the men. When wounded, he hid his face in his hands and sobbed like a human being.

Quelch did not arrive until breakfast time on the fourth day, the delay having been caused by the men wishing to attend service at Warushi on Sunday. He only brought on four Arecunas, the others being too weak; in fact, on our return we learnt that two of them died soon after he left, and the required number of 20 was made up with Macusis from Warushi and Kwaimatta.

The next morning the whole company, 46 in number, started early and crossed the Ireng, about a hundred yards above the fall, in two very cranky little boats about a foot and a half wide, made from trees scraped out. Only two people could cross in each boat at a time, and it was an hour and a half before all the men were on the other side with their loads.

A short walk through some bush brought us once more to the open country, and after three hours' jog-trot on a fairly level track, we arrived at a village of two houses called Cosanota, about 300 yards from the Canota Creek. It was a very pretty sight to see this little cluster of houses in the middle of a level valley with a splendid background of bare and wooded hills. On our right a belt of bush marked the course of the Kurewaka River, which runs due east to the Ireng for the whole length of its course.

Some of the people of Cosanota had been on a fishing expedition and seen us from the opposite bank when we first arrived at Karona. Learning from our men that we were bound their way, they had prepared a feast in the form of a course of paiwarri. Directly we heard this, we knew it would be no use attempting to go any farther that day, so we had breakfast and slung our hammocks in the fringe of trees on the river's edge.

The paiwarri-drinking was not a great success, and only served to make the people argumentative. They had prepared cassava bread

specially for us, each cake being about one-twentieth of the ordinary size, and these they broke in half and wished to pass each half as a whole; at the same time, although the size was reduced, the price was to remain the same. An ordinary cake we used to value at 4*d.*, and paid in barter accordingly, doubling the original cost of our goods for freight and portage; this was a low value to place on them, as a trader who brought 15 packages, averaging 1 cubic foot each, from Waraputa to Kwaimatta only, asked us \$186, although he was coming in any case.

The Indians were rather smart in bartering, and usually tried to divide the provisions they wished to dispose of into two or three lots; they seemed to understand that if all were bought at once we would give, say, a flask of powder or its equivalent, but when divided into three lots, there would be a chance of getting half a flask for each.

A small boy belonging to our party, while drinking a calabash of paiwarri, was stung on the lip by a manuric ant; this caused his head, which was never at any time small, to swell, and brought on an attack of fever, which caused us some delay the next day in having to wait for him. Almost immediately after leaving Cosanota, we came to a village of two houses called Warapata, at the foot of a big hill called Warapying, and a mile or two farther on met the Acouli, a shallow rocky river running to the Kurewaka, and this we crossed five times before breakfast. On this day we made a large collection of savanna plants, one of the most striking having a convolvulus-like flower of a bright sky-blue colour; it was very common on this part of the savanna, and we met large quantities of it for about three days, but on our return, when we were a little farther north, on the other side of the Kurewaka, we did not notice a single specimen. Birds and insects were very scarce, and, with the exception of a very few small flocks of parrakeets and an occasional hawk, we saw nothing in this line. We did not observe a single insect. These small savannas between the hills are dotted over with numerous ant-hills, some of which are 10 feet in height. They are made of earth, cemented together so as to form a hard solid mass; some of the shapes are very peculiar, many resembling human beings. On several occasions I dug the point of my cutlass into these heaps, but never succeeded in finding an ant, neither did we see any in the vicinity; these mounds are all on the low ground, I do not remember noticing any on the hill-sides. After several miles of very rough road, which in many places was over pure white quartz and very tiring to walk on, we stopped for the night at a stream, on the banks of which three curatella trees gave us barely room for our hammocks, the men sleeping on the rocks near us. We had some good bathing before dinner, Quelch and the Indians having diving and swimming-matches. The Indians were very amused by Lloyd diving head first on to a rock a little way below the surface. The small fish were very startling at times, giving very sharp nips on the legs whenever we ceased moving, and making us wonder if there were any larger ones anxious to play the same game.

The following day we started early and continued our course in the same westerly direction for about three hours. We then turned north and ascended Powlinowta, a hill some 1600 feet in height. Next to

BIRDS OF BRITISH GUIANA.



ARECUNA BOY.

us was a large bare hill, Marakuping, at the foot of which runs the Marakany.

From the top of Powlinowta, looking up the valley and through a gap in the next chain, we saw Weitiku away in the distance, and beyond, for an instant, we could make out Roraima some 80 miles from where we stood, the intervening distance being filled with groups and chains of mountains which we had still to tackle.

While admiring this view, a large wiking, or savanna deer, passed close to us and rushed furiously up a hill opposite and disappeared over the top, the men gave chase, but it was no use; this was the only quadruped we saw alive on our journey between Kwaimatta and Roraima. We breakfasted on the other side of the valley at a small gully, which rejoiced in the name of Nounkaonta, or the abode of the sand-fly; we were, however, lucky in finding the inhabitants away from home.

Four miles farther on we camped at Kurewakapa, the source of the Kurewaka, a heap of rocks about five yards square, on which grew three or four trees conveniently arranged for hammocks; two or three flocks of pigeons came to the trees while we were making camp, not in any way afraid of the large crowd. Our guide, who called himself "Schoolmaster," stalked two, and was within five yards on each occasion when he fired: of one we could only find the head and neck, to which one wing was attached by a shred of skin; while the other apparently vanished off the face of the earth—at least, we could find nothing but two or three feathers. The roads had been very bad, and the men began to complain and wished they had taken the road suggested by the Arecunas; the men all wore sandals made from the base of the leaf-stalk of the Ecta palm, but these did not protect the sides of their feet from the sharp rocks. These sandals are fastened on by a string, which passes between the great toe and the next. When new they are from $\frac{1}{2}$ to $\frac{3}{4}$ of an inch in thickness, but only last three or four days.

The next morning we crossed the Marakany and the Sacuota, which apparently runs to the Ireng, and not the Cotinga, as shown in the map, and reached Palapowta, a village inhabited partly by Macusis and partly by Monaicos. The village is divided into two parts on opposite hills about a mile from each other; the men stayed at the western half, while we went about half a mile farther on and camped in some bush in the valley beyond. The people, headed by their chief, named Adam, an old man with a straggling grey beard, came to see us to barter for provisions; we were very fortunate in securing a large supply of cassava and yams and two or three gourds of honey, which was almost water-white with only a faint flavour.

Walking on towards Sabang, a high sugar-loaf mountain, and crossing the Lake, we came to a Lokorico village, Celeh, where we waited for some little time. In the afternoon the road became worse than ever, being covered with sharp rocks and loose quartz; in some places we had to walk through long grass which hid the stones, and great care was necessary to avoid a fall. We crossed the Lake again at Sokoking, the point where it enters the Cotinga, and had a good view of the falls, which are called "Sokoëmaru" in Arecuna, or "Soko-marari" in Monico, and are some thirty feet in height. Our next

undertaking was to cross the Cotinga to a small island near the opposite bank. This did not appear to me a very difficult task until I tried it. The river was running strongly and came above my waist, and the bottom was made up of large slippery stones which rolled under the feet. We all cut long sticks to help us in withstanding the stream, and went over in twos and threes supporting one another, some of the stronger men crossing two or three times to assist in bringing over the loads. Crossing to the mainland early the next morning we arrived in Arecuna country, and after passing a village called Yamacoumella, on the Elinisia, we reached Yaramonta. Although early in the afternoon, we made camp near the village, my feet having given out. The people in this part of the country seemed very timid, running into their houses and hiding in corners when they saw us coming, and our men made them worse by groaning at them through the door; but when they saw that we were only on a friendly visit, they would bring out a cake of cassava on a mat with a stew of pappus and put it outside the house for us as a welcome.

The next morning I was unable to go on, so decided to stay behind with ten men, while Quelch continued his journey. We were told it would take four days to cut a track through the bush up the side of Roraima, and this would give me a chance of coming up to him. In the afternoon one of the Indians looked at my feet while I was lying in my hammock, and found that instead of being bruised they were full of jiggers, which had burrowed into the soles, and directly these were removed I was practically all right and ready to start: this we did early next morning, after bartering some cassava for a few fish-hooks. Shortly after starting, I saw a curious table-land on our right, in the middle of a regular range; one mountain seemed to have had its top removed and replaced by a big level savanna extending back for a considerable distance. At the end of this savanna, many miles off, I could see another range rising from the level. In the afternoon I had a slight attack of fever and camped early. Soon after this Roraima came into full view, with Weitipu in front a little to the right, but we soon lost sight of them as we descended into the valley of the Cuino, which we had to ford. On the opposite bank we met some Indians carrying an immense vessel of cassava, which I bought. David, our huntsman, undertook the job of distributing it, and did so by filling each man's gourd and drinking half before he handed it back. They refused to sell me some sugar-cane they had with them, but after I moved on they either gave it away or my men took it, for when I looked back each man was carrying about 12 feet. We next ascended a hill which rose steeply for 1000 feet and camped in the valley beyond, at a spot where a few trees grew from the rocks in the middle of the stream. Just before putting up our hammocks, we had a very heavy shower, and the water swelling rapidly, nearly obliged us to move elsewhere; this was the first shower we had had since leaving Kwaimatta.

The following day we had one or two particularly stiff climbs, which, however, were not quite so trying as those we had lately, the quartz and quartz-porphry having been replaced by sandstone, which had worn more or less smooth, while in the valley we only had to put up

BIRDS OF BRITISH GUIANA.



ARECUNA GIRL.

BIRDS OF BRITISH GUIANA.



ARECUNA CHIEF AT RORAIMA.

with small round ironstone pebbles, which would have been considered bad enough on ordinary occasions, but after our late experiences could be regarded as affording pleasant walking. In the middle of the afternoon, after walking for a mile over the summit of a level-topped mountain, we came to the edge of the decline, and saw before us the valley leading to the base of Roraima. The sight of this group of mountains was magnificent: on the left Kukenaam and Roraima with their perpendicular walls rising from the plain, next to them three smaller curiously-shaped hills, and then Weitipu, a mountain which in some parts still shows on its face patches of perpendicular walls, pointing to its having formerly been similar in appearance to its neighbours, although time has nearly effaced these characteristics, and farther to our left rose two smaller mountains, of a steep cone-like form, called "Womak" and "Makulitpar." The distance was very deceptive; Roraima did not appear to be more than three miles off, but the following day we found that twenty-five was much nearer the mark.

It seemed that we would never arrive at the corner of the mountain, and it was some seven or eight hours before we reached the nearest point, crossing on our way several shallow streams, the bottoms of which were perfectly smooth, like a swimming-bath, and covered with brownish slime. The valley, which the evening before had appeared perfectly smooth, was found to have one or two biggish hills, but we were so pleased with the idea of having almost reached our destination, that we went on at a jog-trot, hardly stopping to rest at breakfast-time. We had to pass the full length of the south-west face and reached Kamaiwawong, the little village at the end of the valley between Kukenaam and Roraima, about 4 o'clock, only two hours after Quelch; this was on 3rd November, the 19th day after my start from Kwaimatta. Quelch had been compelled to camp early on one or two occasions, on account of his guide, who was suffering from fever, and this accounted for our arriving so close together. The chief and his brother were dressed in their best clothes to receive us: the former wore an old frock coat, which we concluded might have been given to his father by Schomburgk when he visited Roraima in 1838; over this he wore a pair of braces hanging loose over his shoulders, and a long piece of red ribbon round his waist completed the costume. His brother had a red blanket tied round his neck reaching to the ground behind, and a tall pointed felt hat on his head.

There were about six houses in the village, and one of these the chief had handed over to Quelch. It was of the ordinary form, with thatched roof of palm-leaves, wattle sides covered with clay, and one door. In this 46 of us slung our hammocks.

The men were in great spirits at having finished the first stage of our trip, and stayed awake talking and laughing till late. We felt the cold in spite of blankets and seven fires burning on the floor of the house, and in the morning found the thermometer had registered 54°, about 20° lower than the temperature to which we had grown accustomed at nights.

Early in the morning we were up looking at the mountain we had come so far to see; straight in front of us it rose to a height of 5000 feet above the plain, its summit hidden in clouds, which would

not be dispersed until the sun was well over the horizon; the perpendicular walls, of which we had heard so much, rising from the front and disappearing behind the clouds above seemed to be of an immeasurable height, while down their face fell the two falls of Kamaiwa and Roraima paru, a long slope starting immediately outside the village led to the foot of the walls. On our left to the south-east was Kukenaam, very similar in appearance, but rising more abruptly from the plain, and separated from Roraima by a narrow valley filled with cloud during almost the whole of our stay at the mountain.

Roraima is rectangular, the north-west and south-east sides being about nine miles, and south-west about six miles in length.

No one has yet visited the north-east side of the mountain, which is next to Kukenaam, but the vegetation is so luxuriant, that little could be seen from the valley, and much time and labour would be lost in attempting to cut a path. On the other three sides the perpendicular cliffs present themselves, but so far the south-west face is the only side in which any attempt has been made to reach the top. Here, years ago, a large mass of the cliff evidently slipped, and, while still retaining its vertical position, has formed a ledge diagonally across the face, by means of which, with a little difficulty, one is able to ascend to the summit. Mr. im Thurn, who, I understand, was at the head of the slope for nearly a month, in his account of his trip, mentioned that a camp should be made some distance up, as it was practically impossible to carry hammocks and provisions to the summit; we therefore decided to spend the first day in finding a suitable spot for a camp and in having a general look round.

After early breakfast, I started with Quelch up the incline; for the first mile or so we were on open grass-land quite devoid of bushes or trees, but after this we had to pass through a belt of bracken six to eight feet in height, mixed with other low growths, one of the most attractive of which was a shrub with dark green leaves, bearing numerous flowers not unlike balls of crimson silk. Passing through a narrow strip of forest, we once more came to the open slope, more rocky and steeper than lower down, the long grass hiding the rocks making walking more difficult; the next feature was a large swamp, wonderfully rich in flowers and plants, and here I stopped to collect while Quelch went on with the two Indians. There were large masses of *Utricularia Humboldtii* with pale purple flowers and dark purple stalks, three feet in height, and of *Brocchinia reducta*, of a bright golden-yellow colour, a thick undergrowth of *Heliamphora*, the S. American Pitcher plant, with its pale pink flowers on long stalks, and curiously-shaped dark purplish and green pitchers; *Drosera*, not unlike our *rotundifolia*, but the young shoots continually growing out from above the older and decayed leaves, gives the plant the appearance of being raised from the ground on a black pedestal two inches in height, in some cases not unlike a *Pepalanthus*; the flowers are pink, on stalks twelve to fifteen inches in length; orchids of many kinds, the commonest of which bore pale and dark brown flowers on a stalk two feet in height. One or two humming-birds flying about in a small clump of bush were the only signs of life I saw, with the exception of a large hawk, probably *Leptodon*, which flew away with a cry and



BIRDS OF BRITISH GUIANA.



OUR CAMP ON THE SUMMIT OF MOUNT RORAIMA.

flight not unlike a sea-gull, the prevailing white colour aiding the resemblance.

On his return, Quelch told us that the path was fairly easy, and that very little clearing would have to be done, at any rate, for the first part of the thick belt of bush which surrounded the base of the cliff. Following the advice given by Mr. im Thurn, Quelch started next morning with all our men to erect a palm-leaf house as far into the bush as was possible in one day, while I stayed below to take one or two photos, and the next morning we moved up, with hammocks and provisions, to our new camp.

Entering the bush at the head of the slope for the first time, I was quite taken aback at the appearance of the vegetation. Masses of creepers and lianas twisted and tangled together in such a way that it was almost impossible to see more than ten or twelve feet in any direction, rocks, roots, and creepers mixed under foot in a surprising manner; occasionally we could hear the roar of a torrent under us but out of sight. It was difficult to say where the ground actually was, we were certainly not walking on it, neither could we see it; we were standing at one time on rocks, at others on fallen tree-trunks, creepers, or bush-ropes, between which the spaces were filled with decaying vegetable mould and moss, every now and then a branch or root would break, and some one of the party would be seen with only half of his body above ground, while his legs were dangling somewhere below out of sight. The stuffy dampness was almost overpowering, especially as the climbing was very severe; every branch and tree seemed covered with moss, lungwort, or lichen, saturated with moisture, which to us in our heated condition seemed icy cold; our clothes were wet through with the dripping of this moisture in less than five minutes. After about a couple of hours of climbing, sometimes over large rocks, or perhaps under them, up slippery tree-trunks, and over or through tangled creepers, using our arms almost as much as our legs, we reached the camp which the men had prepared the day before; some long poles propped against a straight face of rock and covered with palm-leaves made a very good shelter, but not in any way comfortable, the floor being as uneven and unpleasant as the path.

Most of the men now left us, not caring for the cold night, and being also more or less afraid of evil spirits and of the big bird which carries away anyone rash enough to attempt to reach its abode on the top of the mountain.

Next morning our clothes and hammocks were wet through with the damp, and we felt more as though we had been sleeping out in November in England than in the height of the dry season in Guiana. Continuing our path, the men on in front cutting as they went, passing palms, large tree-ferns, and large quantities of the Roraima blackberry (*Rubus roraima*), a plant closely resembling our English species, but bearing fruit more abundantly, we reached the face of the cliff; here and there, on the moss and on the cliff itself, we noticed the two blood-red *Utricularias*, *montana* and *cambeliana*, and one single specimen of a pure white. Looking up, we could see the straight smooth wall, and as we turned to the left to ascend the ledge, could realize its height and magnificence. Soon among a tangle of climbing

bamboo, we emerged from the streaming wood and saw before us the deep gully cut through by the fall of Roraima paru; here, too, for the first time we could see the sky and the brilliantly-lighted landscape before us; other hills, which appeared high enough from the savanna now appeared dwarfed and insignificant. Beyond the village we could see the river of Kukenaam, into which the water of Roraima paru flows, winding away to the south, where, after turning north, it runs into the Caroni and so to the Orinoco, 100 or 150 miles from its mouth.

Looking into the gully, we could see that, by keeping close to the cliff, a descent of 100 feet and an ascent up a rocky wall, over which water was flowing on the other side, was all that was required of us to overcome what appeared from the distance a formidable obstacle; in fact, so impracticable does it appear, that no one had attempted even to reach this point until Im Thurn and Perkins came in 1884. Schomburgk, B. Brown, McTurk, Beddam, Whetham, Whitely, Seyell, had all seen the ledge, but decided that it was not worth while making an attempt to ascend by it; this, combined with the fact that most of the above-mentioned travellers were short of either boots or food, or both, account, to a great extent, for the top of the mountain remaining unexplored for fifty years after its discovery by Schomburgk.

On the side on which we descended there were a fair number of bushes and branches by which we could hold on, but on the opposite side the rock was bare, with a stream of water running over its full width, and took us some little time to overcome, but once across, we could see our way clearly.

The extraordinary mountain Roraima, on the confines of British Guiana, near the boundary of Venezuela and Brazil, has long been an object of wonder and speculation.

Situated away from the beaten track and far from any civilised centre, it remained unknown except to the red man until it was discovered by Sir Robert Schomburgk, whilst he was engaged in making a survey of the Colony in 1841. Since then few white men have explored the district, but the description and accounts given by them on their return have only added to the wonder and mystery by which the place was surrounded.

No one who read these accounts could fail to have their interest awakened. Here was an immense mountain with a towering quadrangular pediment, whose lofty walls, rising perpendicularly for nearly 2000 feet above its slope, had shut off from the rest of the world, presumably from the earliest times, a tract 54 square miles in extent and nearly 9000 feet above the sea-level. What might there be, what might there not be on the summit? Information gathered from the Indians in the surrounding villages only added to the interest. The mountain was, it was said, not only inaccessible, but jealously guarded by animals such as had been remarkable in the time of Sindbad the Sailor. A huge bird there was that carried away the too-adventurous traveller, or should he by luck escape the eagle eye, he still had to face a terrible serpent of dimensions which can only be imagined.

Such was the information to be gained from the only people at all familiar with the place, but they lived in a country renowned for its wonders from its earliest discovery. 'Twas not far south of this that

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SUMMIT OF MOUNT RORAIMA.



SUMMIT OF MOUNT RORAIMA.

El Dorado, the gilded king, lived in his golden city on the banks of Lake Parimá. 'Twas but a little to the west that Sir Walter Raleigh heard of that headless tribe with mouths in their stomachs and an eye on each shoulder. What wonder then that strange legends still exist. The people are not much changed from the days when Raleigh and Keyrics first passed the dense forests and reached the level savannas beyond.

It is almost impossible to imagine what these first travellers must have suffered in their search for gold and adventure, marching day after day and month after month through stifling swampy forests, reeking with moisture and the odour of decaying vegetation, weighed down with heavy armour, weakened by malaria, obtaining provisions with difficulty from the Indians, and all the time uncertain whither they were going. We know that captured Indians were made to serve as guides; but guides are of little use to people whose object is to reach a place which exists only in the imagination. We know the difficulties that surround the modern explorer who starts equipped with portable boats, tinned provisions, breech-loader, a well-stored medicine-chest, and generally a very good idea of the point at which he wishes to arrive. How much greater must have been the difficulties faced by those early travellers who passed from the mouth of the Orinoco to the Magdalena River, or from the Amazon mouth to the Andes—this latter being equal in length to the journey from the Congo to Zanzibar.

Since its discovery several attempts have been made to explore Roraima and examine the forests on its summit and the deep lakes filled with dolphins and strange fish, of which the Indians spoke but which they had never seen—all unsuccessfully until in 1884, Messrs. Southern and Perkins found a practicable path of ascent to the top.

Sir R. Schomburgk in 1838, and again in 1842, when he was accompanied by his brother Richard, made little or no attempt to ascend the vertical walls, apparently regarding it as impracticable. Barrington Brown in 1869, while engaged in making a survey of the Colony, approached from the south-west, but, provisions failing, was forced to return, having merely reached the lower slopes; while again in 1872 he approached from the north, but did not actually reach the mountain.

McTurk and Boddam-Whetham in 1878 started from the coast with the special intention of making an ascent, but, after walking round and examining three sides of the mountain, abandoned the attempt as impracticable. Their provisions being almost exhausted and their boots beyond repair, they were compelled to return, but not before they were convinced that any further attempt would be futile. The vertical walls of the lofty pediment had been to them, as to former travellers, an insuperable barrier. As Boddam-Whetham remarks:—"..... Out of a sea of green rises a perpendicular wall of red rock 1500 feet in height. Hardly a shrub broke the sheer descent of the shining cliff; scarcely a line of verdure marked where clinging grasses had gained a footing on its smooth face. The south-eastern corner was slightly rounded and its tower-like appearance increased its general resemblance to a Titanic fortification a few miles in length, rising from

a forest glacia. The glancing rays of the sun struck the red sandstone layers, which shone like glass and stood out in bold and bright relief above their green base. A fly could hardly have rested on the slippery slabs."

His sentiments on viewing the mountain, to which he here gives utterance, were without doubt those experienced by all who had approached Roraima; and the idea of its inaccessibility could hardly be more definitely expressed than in the statements that "nothing less than a winged Pegasus could expect to attain the summit of the bare red wall," or "that unless one ascended the mountain by means of a balloon, the question (*i. e.* of the animal life on the summit) could never be settled."

And, indeed, for one who has some slight acquaintance with the scene, it is not difficult to imagine the utter hopelessness of making an ascent which seems to have been felt by all the earlier travellers who came within sight of the famous mountain.

The enormous walls which form the sides of the quadrangular pediment are everywhere equally lofty and precipitous, presenting a facing not less than 30 miles in length. The imagination fails adequately to picture the imposing grandeur of a cliff such as this, raised on its sloping tree-clad pedestal, 4000 feet above the surrounding level—a grandeur that is heightened by the many waterfalls which, starting from the sky-line, leap forth sheer into the forest below to join the headwaters of the Amazon, the Orinoco, or the Essequibo. The Indians were, indeed, happy in their choice of expression when they sang of "Roraima the red rock, the ever-fruitful mother of streams."

Previous to the actual ascent by Mr. im Thurn, Henry Whitely, the naturalist, seems to have been the only traveller who, after trial, believed in the possibility of reaching the summit by means of a ledge on the south-west face. As related by him in the 'Proceedings of the Royal Geographical Society,' vol. vi. 1884, pp. 459–463, Whitely spent several months at Roraima in 1883 collecting specimens of birds, and during this time observed the sloping ledge which at present affords the only practicable means of ascent.

About halfway up this ledge there is a sudden break which, from below, seems to render all further advance impossible—and it appears that Schomburgk so regarded it. Whitely, however, essayed the attempt, and but for the fact that the track cut by his Indians did not lead to the real foot of the ledge as he directed, and that a dense mist suddenly enveloped them, there is no doubt but that he would have succeeded in reaching the top. From his description and the excellent drawing of this south-west face of Roraima with the broken ledge *in situ*, which accompanies it (*loc. cit.*), there can be no doubt on this point.

Southern and Perkins in the next year followed more or less in his track to the bottom of the ledge, which leads diagonally across the face to the summit, and by following it succeeded in ascending the mountain. Unfortunately, owing to unfavourable weather, they were unable to spend more than an hour or two on the top, nor were they able subsequently to return. For the first time, however, some idea was gained of the configuration and physical conditions of the summit,



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while a small collection of plants, the great majority of which were new species, served to indicate to some extent the peculiarities of its biological condition. Brief as had been the visit of the explorers, the results had been of very considerable interest, and rendered still more urgent the desirability of a detailed exploration of the isolated plateau—even though no indications had been met with of the antique or antediluvian creatures which speculation had regarded as likely or probable to be discovered. The path to the summit was, indeed, now open, but the difficulties to contend with were hardly less serious than before.

The land near the coast and for several miles inland is uniformly flat, and has been formed by a quite recent alluvial deposit from the large rivers; it is on this coast-line that the sugar-estates for which the Colony has long been famous are situated, immediately behind is dense forest extending inland for a varying distance, not often less than 200 miles and covering level country intersected by numerous streams; the vegetation on all sides is most luxuriant, and for the greater part so dense that it is impossible to penetrate without first cutting a track. After some fifty miles the land becomes hilly, in parts even mountainous, and covered with large forest-trees; beyond this again comes the savanna district, extending far back into Brazil and Venezuela with mile after mile of open country crossed here and there by small ranges of hills.

Of details of the interior practically nothing is known—the many rivers which run northwards to the sea, for the entire length of the Colony, afford such a ready means of communication for the few people who travel beyond the coast-line that the absence of roads has never been found an inconvenience, and with the exception of one or two small districts where gold has been found nothing is known of the Colony beyond the banks of the rivers.

The parts of the rivers which run through the alluvial district, in comparison with higher reaches, have little to recommend them to travellers. They are tidal, and the black mud deposited on the banks is repulsive; the long line of bush on either bank, of which only the first belt of trees can be seen, is low and wearisome. Nothing but muddy water, mud, and continual green meet the eye, no spring or autumn tints, and but few bright flowers relieve the monotony; at the water's edge grows a species of caladium known as *moco moco*, and behind this low undergrowth a forest of light timber of no practical use and of no great size.

Small steamers can travel for a considerable distance up the rivers until the channel becomes blocked by dykes of rock, and from these points boats specially built for working on the rapids and falls have to be used. Here there is an entire change of scene, hills rise on either hand almost from the water's edge, the muddy banks are replaced by sandy beaches, rocks and sand-banks show up in mid-stream; the water is no longer muddy, but clear and bright amber-coloured.

The lower parts of these rivers have just been described as low dirty, and monotonous, and one might be inclined to think that they are to be avoided; but, although the general effect is as described, close investigation of details will well repay the observer for his trouble.

The dense undergrowth and the forest-trees are of infinite variety, both in form and species, strange growths of trunks or leaves, of lianas and parasites, attract the attention. Birds are more numerous than in the higher reaches of the rivers, Parrots, Pigeons, Scarlet Ibis, Sandpipers, and Plovers fly in countless flocks in their respective seasons; Cranes, Herons, and other wading-birds congregate in open spaces on the cattle-farms and uncultivated portions of sugar-estates on the coast, and small birds are found everywhere, the nearer civilization the greater the number—in fact, in Georgetown alone over one hundred species have been observed. Occasionally one passes an Indian settlement consisting of one or two houses, but, with the exception of the little clearing in which a few provisions are grown, the whole forest is untouched.

The three routes by which travellers have reached the Roraima district all commence by the lower waters of the Essequibo, and branch westward either up the Mazaruni, the Potaro, or the Rupununi.

The scenery of the two first-named is the most striking and attractive, but the last or Rupununi route presents a greater variety of scene and facilitates an insight into the life and customs of the tribes dwelling in the savannas, especially the Arecunas and Macusis. It was for these reasons that the explorers selected the Rupununi route on the occasion of their expedition to Roraima in the latter part of 1894. There is no record of anyone having approached the mountain from the Venezuelan side, although, so far as can be seen, there are no natural obstacles in the way.

Bartica Grove, a small township situated at the junction of the Essequibo and Mazaruni, was then the usual starting-place for most of the expeditions into the interior of the Colony. It is easily reached from Georgetown in a few hours by means of a small river-steamer, and as it commands the mouths of the Mazaruni and Cuyuni, as well as the Essequibo, it promised at one time to become a place of great importance as a base of operations for the gold-diggings.

Within the last few months, however, a short railway has been opened up from the Demerara River to a point above the falls on the Essequibo, and as this has diverted the greater part of the traffic from the lower part of the Essequibo, Bartica seems to be doomed and has already assumed a semi-abandoned appearance.

We have been unable to find any account of the late Mr. F. V. McConnell's expedition to Roraima in 1898; but the collections of zoology made during his journey were described in the 'Transactions of the Linnean Society,' Zoology, (2) viii. p. 51, 1900, and the following abstract, which has been made from the work mentioned, will show the route taken on that occasion:—

"The specimens were obtained by Mr. J. J. Quelch and myself (F. V. McConnell) on our second expedition to Roraima in August, September, and October, 1898. The route taken on this occasion was by the Mazaruni and Curubung rivers to the Falls of Macrobah, a boat-journey of twenty days, and thence by land to a point on the Upper Mazaruni where that river flows at a height of 1300 feet.

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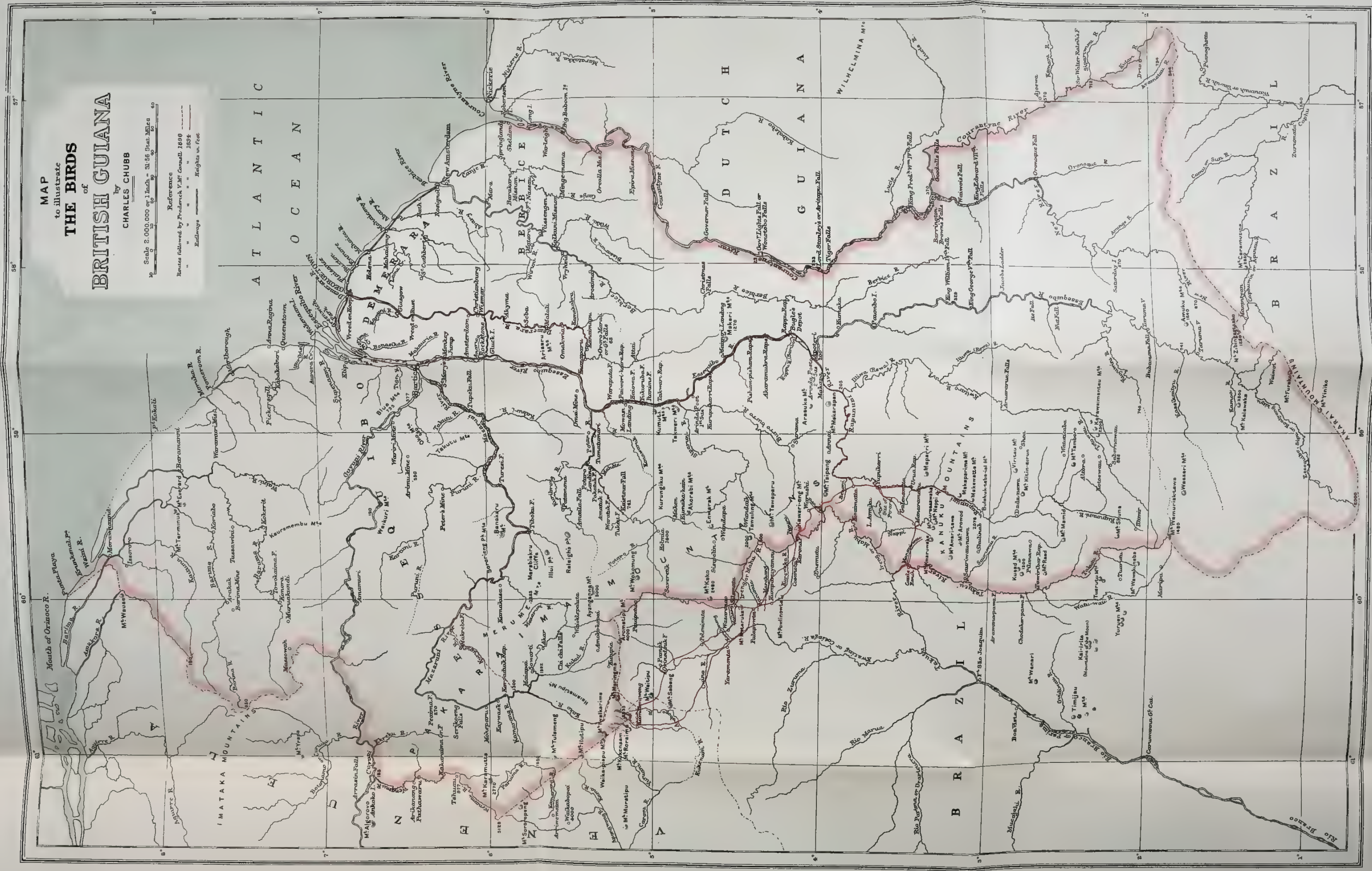
57^c

Scale 2,000,000 or 1 Inch = 31.56 Stat. Miles

Reference

Routes followed by Frederick V. F. Conzell 1890

Reference	Heights in feet
11	1694



Small bark-canoes were here obtained, and after three days' journey up the Cako and Aruparu, we arrived at the commencement of the trail to Roraima. With the exception of the last twenty miles, the whole journey, which occupied forty days, lay through thick forest.

"Mount Roraima (8700 feet) is formed by a sloping base, surmounted by a rectangular mass, fifty-four square miles in area, with perpendicular walls 2000 feet in height. On the south-west, part of the wall has slipped and lies diagonally across the face of the upper part of the mountain. By following the ledge so formed the summit can be reached without serious difficulty."

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INTRODUCTION.

THE original intention was to prepare a list of the species of British Guiana birds in the collection of the late Mr. F. V. McConnell, for publication in some periodical, in order to record species that were hitherto unknown to occur in the Colony, and to describe the plumages of some of the species that were not given, for want of material, in the 'Catalogue' of the Birds in the British Museum. But after the death of Mr. McConnell the writer was requested by Mrs. McConnell to give descriptions to each of the species, with a view to publishing it in book-form—hence the present work—which will occupy two volumes.

The classification followed is the same as that used by Brabourne and Chubb in their 'List of the Birds of South America.'

The aim of the present work has been to describe each family and give an outline of its general distribution with the number of the genera and species that are known to occur in South America, and also the number of those represented in British Guiana. To describe each genus, many of which have been illustrated by text-figures, and to give diagnostic keys to the species. To give the reference to the original description of each species, with its type locality, and any further references that apply particularly to British Guiana, and the Catalogue of the Birds in the collection of the British Museum—Volumes I. to XXVII.—1874 to 1898. To record the date of the breeding-season, and give a description of the nest and eggs and an abstract of the notes on the habits whenever they occur in the works of reference mentioned in the bibliography. To record also the localities where

specimens have been collected or observed within the Colony and to give an outline of the extralimital range of each of the species.

It may be mentioned, however, that there has been no attempt to compile an exhaustive treatise. This book, therefore, can only be regarded as a basis for future work, as it is quite obvious from the many omissions that there is a great deal yet to be done before we can have anything like a complete knowledge of the subject.

In the following pages three new forms are described from the McConnell collection. These are northern representatives of species originally described from the south, or southern localities, viz. *Ortygops duncani*, which is allied to *O. notata* Gould, who described it in the 'Voyage of the Beagle' from La Plata; *Creciscus macconnelli*, closely allied to *C. melanophæus* Vieillot, which was founded on "*Ypacaha pardo obscuro*" of Azara from Paraguay, and *Ciccaba macconnelli*, nearly allied to *C. superciliaris* Pelzeln, which was described from Brazil.

The following species and subspecies described in the present volume are peculiar to British Guiana:—*Crypturus macconnelli*, *C. dissimilis*, *C. simplex*, *Penelope granti*, *Ortygops notata duncani*, *Creciscus melanophæus macconnelli*, *Ciccaba superciliaris macconnelli*, *Bolborhynchus panychlorus*, *Hydropsalis schomburgki*, *Caprimulgus whitelyi*, *Chætura albicincta*, *C. guianensis*, *Campylopterus hyperythrus*, *Agyrtrina whitelyi*, *Saucerottea cupreicauda*, *Chlorostilbon subfurcatus*, *Petasophora germanus*, *Heliodora xanthogonyx*, *Lophornis parnoninus*, *Neomorphus rufipennis*, *Aulacorhamphus whitelyanus*, and *Picumnus macconnelli*.

Mr. H. Grönvold has prepared the original drawing of each of the coloured plates and of the text-figures, which have been reproduced by Messrs. John Bale, Sons, and Danielsson.

The accompanying map of British Guiana has been engraved by Mr. H. F. Milne of the Royal Geographical Society.

It will be observed that the spelling of the names of a large number of the localities has been changed more or less, and more especially in regard to the letter "c," which is, in almost all cases, replaced by the letter "k." I may mention, however, that I have, when quoting, retained the author's original spelling.

I desire to express my best thanks to the following gentlemen for advice and assistance during the preparation of the present volume:—Lord Rothschild, and Mr. W. R. Ogilvie-Grant and Mr. C. E. Fagan of the British Museum (Natural History).

CHARLES CHUBB.

London, April 24th, 1916.

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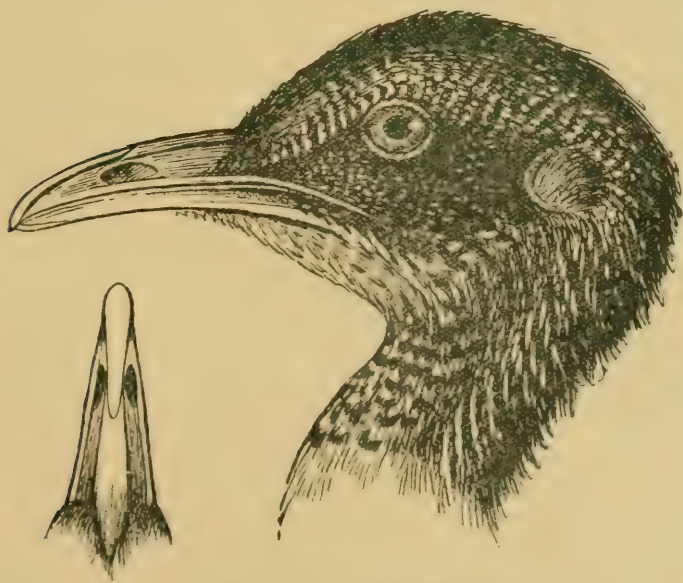
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BIRDS OF BRITISH GUIANA.

Order TINAMIFORMES.

Family TINAMIDÆ.

THE Tinamous are birds of medium size, ranging from the dimensions of a Quail to that of a Guinea-fowl, and more or less like game-birds in appearance, but they can always be



Tinamus tao septentrionalis.

Fig. 1. —To show the character of the bill, which is peculiar to the family.

distinguished by their long thin bills, short tails, and small feet. Their eggs are, moreover, peculiar by the highly polished shells.

The distribution of the family is within the limits of the

Neotropical Region, and is known to occur from Mexico through Central and South America to Patagonia.

The family comprises about seventy species, seven of which are represented in British Guiana, two being endemic.

Genus **TINAMUS** Herm.

Tinamus Hermann, Tab. Affin. Anim. p. 164, 1783. Type *T. major* (Gmel.).

This genus is distinguished from *Crypturus* chiefly by the larger size of the birds, the longer tails, and the roughness on the hinder portion of the tarsus which is composed of hexagonal scales, while the front aspect is smooth and transversely scutellated.

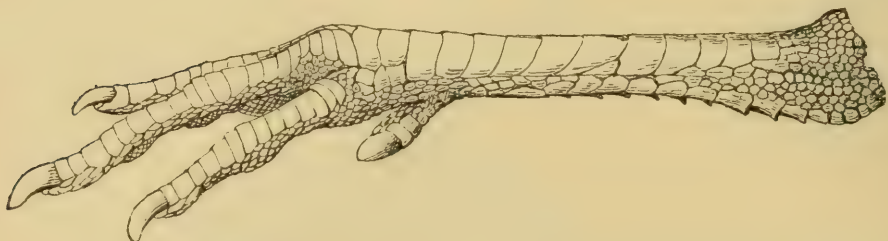


Fig. 2.—To illustrate the transverse scutellations on the front part of tarsi and the hexagonal scales on the hinder portion.

Key to the Species.

- a.* Larger, wing more than 250 mm.;
upper surface blackish, broadly barred;
crown of head black *T. tao septentrionalis*, p. 2.
- b.* Smaller, wing less than 250 mm.; upper
surface olive, almost uniform; crown
of head chestnut..... *T. major*, p. 4.

1. *Tinamus tao septentrionalis*.

NORTHERN BLUE TINAMOU.

Tinamus tao septentrionalis Brabourne & Chubb, Ann. & Mag. Nat. Hist. (8) xii. p. 578, December 1913 (Plains of Cumana, Venezuela).

Tinamus tao Temm., Salvad. Cat. B. Brit. Mus. xxvii. p. 497, part, 1895; Beebe, Zoologica, i. p. 71, 1909; id. Our Search for a Wilderness, pp. 321, 389, 1910.

Trachypetmus canus (Wagl.), Cab. in Schomb. Reis. Guian. iii. p. 749, 1848.

Adult male. Head and nape black; sides of face also black

intermixed with white ; a variegated line of black and white on each side of the nape ; mantle and lesser upper wing-coverts black minutely freckled with olive ; back black with wavy olive cross-bars which increase in width on the lower back and rump ; upper tail-coverts like the mantle ; tail black freckled with olive ; bastard-wing, primary-coverts, and quills black, outer webs of secondaries coarsely mottled with olive ; throat white mottled with black ; lower fore-neck and breast slate-grey with a slight trace of narrow black wavy lines ; abdomen pale buff ; flanks and thighs freckled with grey and buff ; a black garter immediately above the knee-joint ; under tail-coverts ferruginous buff mottled and lined with grey. "Iris red-brown" (*Goering*).

Total length 445 mm., culmen 37, wing 282, tail 96, tarsus 73 middle toe and claw 41.

The McConnell collection does not possess an example of this species. The above description is taken from a specimen in the British Museum, collected at San Esteban, Venezuela, by A. Goering : Salvin-Godman collection.

Breeding-season. Unknown in British Guiana.

Nest. "A slight hollow scratched in the ground" (*Beebe*).

Eggs. "They are of a medium shade of shining turquoise-blue. In shape they are spheroidal, with almost equally rounded ends. The measurements are 58×48 mm." (*Beebe*).

Range in British Guiana. Aremu River (*Beebe*).

Extralimital Range. Venezuela and Colombia.

The occurrence of this bird in British Guiana was first recorded by Cabanis, who described Schomburgk's collection of birds (*Reis. Guian.* iii. p. 749) which was made during the expedition to determine the boundary between Venezuela and British Guiana. Mr. McConnell did not observe it on any of his travels in the Colony, neither was it represented in any of Whitely's collections. Mr. C. W. Beebe (*Our Search for a Wilderness*, pp. 321, 389), however, mentions having seen it on the Aremu River.

The British Guiana bird was, until quite recently, known as *T. tao*, Temm. from Pará, but Brabourne and Chubb have described it (*Ann. & Mag. Nat. Hist.* (8) xii. p. 578) as a separate race.

Mr. C. W. Beebe (*Zoologica*, vol. i. p. 71) records his observations of the species in Venezuela:—"The first news we had of this bird was at the village of Guanoco, where some of the natives and Indians recognized a painting I showed them, calling it

'gallina del monte con los huavos azules,' which at once identified it.

"We found that the Tinamou inhabited dense jungle, especially on the slopes of rather steep hill-sides, and in such places their high-pitched, rolling trill would occasionally be heard. To catch sight of them was a difficult matter, and only twice did they give us an opportunity to use our glasses and gun. The dark cross-bars or markings show distinctly on the dorsal plumage, which, in shadow, appears strongly bluish.

"On April 12th, after hearing a bird call near at hand, we forced our way towards it into an open glade, a former clearing of some Indian, or made by the cutting of trees for the Pitch Lake Company.

"A Tinamou was seen to creep stealthily along close to the ground, keeping near a rotten log. As it crouched and sprang into the air in flight, we secured it, and found it was of this species. It proved to be a male bird, with the breast-feathers much worn from incubating. Near where we first caught sight of the bird we found a nest with two eggs still warm from the heat of the parent's body. It consisted merely of a slight hollow scratched in the ground near the end of the log, in a rather open patch of grass. One egg was clear, the other was about to hatch. They are of a medium shade of shining turquoise-blue, the egg containing the embryo being about a shade darker than the other. The inner surface of the shell is pale, pearl-grey. In shape they are spheroidal, with almost equally rounded ends. The measurements are: the clear egg 56 x 48 mm., the fertile egg 58 x 48 mm."

2. *Tinamus major*.

GREAT TINAMOU.

Tinamus major (Gmel.), Syst. Nat. i. p. 767, 1789 (Cayenne); Brabourne & Chubb, B. S. Amer. i. p. 2, no. 10, 1912.

Trachypelmus subcristatus Cab. in Schomb. Reis. Guian. iii. p. 749, 1848; Brown, Canoe and Camp Life, p. 48, 1876 (Puruni River).

Tinamus subcristatus Salvin, Ibis, 1886, p. 181 (Camacusa: Merumé Mts.); W. L. Selater, Ibis, 1887, p. 317 (Maccasseema, Pomeroon River); Quelch, Timehri (2) iv. pp. 220, 326, 1890 (Upper Berbice River); Lloyd Price, op. cit. v. p. 68, 1891 (nest and eggs); Salvadori, Cat. B. Brit. Mus. xxvii. p. 504, 1895 (Takutu River); Lloyd, Timehri (2) xi. p. 1, 1897 (habits); Beebe, Our Search for a Wilderness, pp. 319, 389, 1910 (Arenmu River).

Tinamus major major Brabourne & Chubb, Ann. & Mag. Nat. Hist. (S) xii. p. 579, December 1913.

“Maam” (*C. A. Lloyd*).

Adult. Olive-brown above with a tinge of chestnut-brown on the middle of the back ; head and nuchal crest deep chestnut ; breast and under surface inclining to white and the vermiculations much finer ; under tail-coverts vary in colour from ferruginous to pale buff and the brown pattern varies in extent ; bastard-wing, primary-coverts, and quills dark brown mottled with rufous brown on the outer webs of the secondary quills, the innermost secondaries tinged with olive on the outer webs and at the tips.

Total length 400 mm., culmen 31, wing 240, tail 69, tarsus 70, middle toe and claw 37. This example was obtained on the Ituribisi River.

Male and female are similar in plumage.

Young in down. Upper surface chestnut varied with paler and darker colours on the various parts ; the forehead is cinnamon with an almost blackish line across the head from eye to eye, which extends backward in a narrow line along the sides of the crown on to the sides of the occiput ; middle of crown darker than the forehead ; a broad whitish band from the eye to the sides of the upper hind-neck, which is tinged with cinnamon ; lores darker than the forehead ; behind the eye a broad dark chestnut line which covers the ears and extends in a narrow streak to the gape ; a pale buff spot below the eye ; lower back and rump golden yellow with an ochreous line on each side, this line is followed by a much darker brown velvety patch on the sides of the body, becoming paler on the tail ; throat white followed by pale cinnamon-rufous on the fore-neck and breast ; abdomen inclining to white.—Ituribisi River.

There are four other specimens which are in nestling down and similarly marked, but the characters vary more or less in each individual.

Two other examples still retain down on the head, middle of the back, and rump. The wing-feathers are partially developed, the coverts being grey finely mottled with minute brown and white spots at the tips, becoming more ferruginous on the outer webs of the secondary quills ; tail-feathers similar to the secondary quills with rufous spots on the margins ; the under surface, which is still of a downy texture, has a band of chestnut on the fore-neck, the breast and abdomen grey.—Supenaam River.

Another young individual, which still wears the down on the

head, has the back entirely feathered and is of a rich chestnut-brown with ferruginous spots at the tips and outer margins of the secondaries; the under surface is also feathered, being olive-brown in colour with wavy buff cross-bars.—From the Supenaam River.

The next stage of advance is marked by the chestnut colour on the head, the broad black bars on the upper surface, the rufous mottlings on the greater upper wing-coverts and the outer webs of the secondary quills.

Breeding-season. "February to April" (*Schomburgk*).

Nest. "It nests on the ground by making a slight depression among the leaves near the root of a tree" (*Schomburgk*). "The nest simply consists of a slight depression in the ground lined with dead leaves" (*C. A. Lloyd*).

Eggs. "The eggs are seven to ten in number, of a bluish-green colour" (*Schomburgk*). "The eggs, which number from seven to eight, are almost spherical in shape, and of a bluish-green colour" (*C. A. Lloyd*).

Range in British Guiana. Mount Roraima, Ituribisi River, Supenaam River, Bartica, Kamakabra River, Bonasika River, Anarica River, Aurora Creek, Arawai Creek, Essequibo River (*McConnell collection*); Puruni River (*Brown*); Takutu River, Kamakusa, Merumé Mountains (*Whitely*); Maccasseema, Pomeeroon River (*W. L. Slater*); Aremu River (*Beebe*); Upper Berbice River (*Quelch*).

Extralimital Range. North Brazil.

The name of this bird was for many years applied to *T. serratus* (Spix), until Mr. Hellmayr in his excellent work, 'Revision der Spix'schen Typen brasilianischer Vögel,' pointed out that the Guiana bird is the one to which Gmelin gave the name *Tetrao major*.

Habits. According to Schomburgk (*Reis. Guian.* iii. p. 749) this species inhabits the whole of British Guiana, but only in the thick woods. It nests on the ground by making a slight depression among leaves near the root of a tree. The eggs are seven to ten in number, of a bluish-green colour, and the breeding-season is from February to April. During the day it is found on the ground feeding on fruits, seeds, and insects; during the night on trees, in spite of the absence of a hind-toe. Towards dusk one hears its melancholy voice. Its flesh is delicate. This bird is often tamed by the natives.

Mr. C. W. Beebe (*Our Search for a Wilderness*, p. 318)

gives the following note:—"After a half-hour's walk Francis motioned me to take the greatest care, and pressed my shoulder lower until I was almost on my knees while we slowly crept around a great mora trunk. He pointed steadily ahead, but after a three-minute scrutiny I could discern not a sign of life. Then he raised his gun and fired, and set loose a half-dozen feathered bombs, or so it sounded as a flock of nearly full-grown Guiana Crested Tinamou arose with a roar. I secured one with a quick snap shot and we tied up the brace of birds with a slender tough bush-thread. Fastening head, feet, and wings together, the Indian tied them ingeniously around his waist, the birds hanging down behind out of the way."

Mr. C. A. Lloyd ('Iimehri (2) xi. p. 1) gives the following notes:—"The large 'Maam,' *Tinamus subcristatus*, one of the commonest of our game birds, generally selects the bank of a small creek as the site for its nest, which it often places between the spurs of a Mora, *Dimorphandra mora*. The nest simply consists of a slight depression in the ground lined with dead leaves. The eggs, which number from seven to eight, are almost spherical in shape, and of a bluish-green colour, having the glossy sheen peculiar to the eggs of the Tinamous, a character which distinguishes them at once from other eggs.

"According to the statements of many old bushmen, this bird sometimes lays as many as ten eggs, but we never recollect having taken more than eight at one time."

Genus **CRYPTURUS** Illig.

Crypturus Illiger, Prodr. Syst. Mamm. et Av. p. 244, 1811. Type *C. cinereus* (Gmel.).

This genus differs from *Tinamus* by the smaller size of the birds, the shorter tails, and the absence of the hexagonal scales on the hinder portion of the tarsus which is smooth like the front portion.

Key to the Species.

A. Upper surface uniform.

- | | |
|--|-------------------------------|
| <i>a'</i> . Back sooty-black; head dark rufous; breast and abdomen black | <i>C. macconnelli</i> , p. 8. |
| <i>b'</i> . Back and abdomen cinnamon-brown | <i>C. cinereus</i> , p. 9. |
| <i>c'</i> . Back chestnut; head black; breast and abdomen bright rufous | <i>C. soui</i> , p. 10. |
| <i>d'</i> . Back cinnamon-brown; head blackish in front, rufous on hinder crown; breast grey; abdomen dull rufous..... | <i>C. dissimilis</i> , p. 11. |

B. Upper surface barred or freckled.

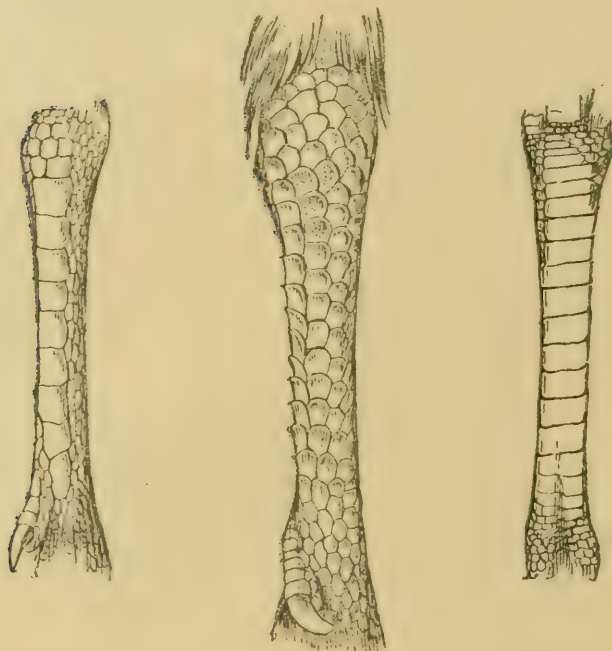
e'. Back black barred with orange-buff; breast
rufous

C. variegatus, p. 12.

f'. Back cinnamon minutely freckled with
dark brown; breast grey.....

C. simplex, p. 16.

Fig. 3.



Hinder aspect of tarsus.
Crypturus.

Back view of tarsus.
Tinamus, see fig. 2.

Front view of tarsus.
Crypturus.

3. *Crypturus macconnelli*.

McCONNELL'S TINAMOU.

(Plate I. fig. 1.)

Crypturus cinereus Hein. & Reichen. (nec Gmel.) Nomencl. Mus. Hein. Orn. p. 303, 1890 (Surinam); Penard, Vog. Guyana, i. p. 320, 1910; Brabourne & Chubb, B. S. Amer. i. p. 3, no. 16, 1912.

Crypturus macconnelli Brabourne & Chubb, Ann. & Mag. Nat. Hist. (8) xi. p. 320, October 1914.

Adult. Upper surface sooty-black with a slight wash of rusty brown; the head rather more rusty brown; bastard-wing, primary-coverts, and quills uniform blackish brown; under surface dusky brown showing white shaft-streaks on the sides of



1. *Crypthurus macronellii*.
McCormell's Tucumanou.

2. *Crypthurus cinereus*.
Cinereus Tucumanou.

the face and throat; the feathers on the breast and sides of the body have paler edges, which impart a scalloped appearance; thighs and crissum dusky grey with pale buff bars and mottlings on the feathers; under tail-coverts sooty-black barred with pale buff; under wing-coverts dark brown, the larger series and quill-lining dusky grey.

Total length 280 mm., culmen 28, wing 185, tail 50, tarsus 55, middle toe and claw 44.

The bird described above was collected at Bartica in 1911.

Male and female are similar in colour of plumage.

Breeding-season. Unrecorded.

Nest. Unknown.

Eggs. Undescribed.

Range in British Guiana. Ituribisi River, Bartica, Kamakabra River, Bonasika River, Abary River (*McConnell collection*).

Extralimital Range. Surinam.

This bird appears to be restricted to the lowlands of British Guiana and we include Surinam, from the fact that there is an example of this species in the Rothschild Museum at Tring from the Dutch Colony.

Habits. Not known in British Guiana.

4. *Crypturus cinereus*.

CINEREUS TINAMOU.

(Plate I. fig. 2.)

Crypturus cinereus (Gmel.), Syst. Nat. i. p. 768, 1789 (Cayenne);
Salvad. Cat. B. Brit. Mus. xxvii. p. 517, 1895 (Takutu River);
Brabourne & Chubb, Ann. & Mag. Nat. Hist. (8) xiv. p. 319,
October 1914.

Adult male. General colour above and below uniform cinnamon-brown, much paler on the head, hind-neck, and throat.

Total length 275 mm., culmen 28, wing 170, tail 57, tarsus 51, middle toe and claw 38.

Adult female. Similar to the adult male. "Eye light hazel; legs and toes yellowish brown; claws horn" (*H. Whitely*).

Total length 268 mm., culmen 33, wing 183, tail 50, tarsus 53, middle toe and claw 40.

Mr. McConnell never met with this species in the Colony, and the only record of its occurrence is that mentioned by Count Salvadori (Cat. B. Brit. Mus. xxvii. p. 517), which was collected by the late Henry Whitely on the Takutu River in the extreme west portion of British Guiana.

5. *Crypturus soui*.

PILEATED TINAMOU.

Crypturus soui (Hern.), Tabl. Affinitat. p. 165, 1783 (Cayenne);
Brabourne & Chubb, B. S. Amer. i. p. 3, no. 22, 1912.

Crypturus savi (Gmel.), Cab. in Schomb. Reis. Guian. iii. p. 748,
1848.

Crypturus pileatus (Bodd.), Salvin, Ibis, 1886, p. 181 (Merumé Mts.);
Salvad. Cat. B. Brit. Mus. xxvii. p. 522, 1895 (Roraima: Bartica
Grove).

Crypturus soui soui Brabourne & Chubb, Ann. & Mag. Nat. Hist. (8)
xiv. p. 319, October 1914.

Adult. Entire back, scapulars, rump, and upper tail-coverts chestnut; tail-feathers grey at the base and rufous at the tips; sides of rump and upper wing-coverts chestnut somewhat brighter than the back, the latter having slate-grey bases; bastard-wing, primary-coverts, and quills blackish with rufous edges to the outer webs of the secondaries; crown and nape dark slate-grey, paler on the sides of the face; a tinge of chestnut in front of the eye; entire under surface rufous, paler on the throat where the feathers have white bases, darker on the fore-neck and sides of the body, paler on the middle of the abdomen, and sandy buff on the under tail-coverts; marginal under wing-coverts blackish, inner ones grey tinged with buff, the greater series and quill-lining silvery grey.

Total length 215 mm., culmen 23, wing 131, tail 37, tarsus 40, middle toe and claw 29.

The description is taken from an example collected at Bartica.

Adult male and female are similar in colour of plumage.

Three examples, from the Mazaruni River, Bonasika River, and Supenaam River, which are apparently adult, have the chin and throat for the most part white and the chestnut on the upper surface not quite so bright. A specimen from Anarica River is similar, but the feathers on the lower flanks have buffy-white tips, which gives a barred appearance.

Two others, one from Mount Roraima and another from Kama-kabra River, apparently immature, have the upper surface much duller, abdomen much paler, inclining to dull white, and the upper wing-coverts tipped with buff as also the lower flank-feathers.

Young. Has the head slate-grey with a tinge of buff intermixed; back and upper wing-coverts warm brown with bright



Feet & Legs in size, 1/2 d.

1. *Crypturus dissimilis*.
Salvadori's Tinamou.

2. *Crypturus simplex*.
Modest Tinamou.

buff edgings to the feathers and submarginal black spots; forehead and sides of the face rather paler grey than the top of the head; throat entirely white; sides of the breast similar to the back but rather paler; middle of the breast ochraceous with black bars on some of the feathers like the sides of the abdomen; middle of the abdomen paler and more uniform.

Breeding-season. Unknown in British Guiana.

Nest. "Nests on the ground" (*Schomburgk*).

Eggs. Undescribed from British Guiana.

Range in British Guiana. Mount Roraima, Mazaruni River, Ituribisi River, Supenaam River, Bartica, Kamakabra River, Anarica River, Tiger Creek, Essequibo, Great Falls, Demerara River (*McConnell collection*).

Extralimital Range. Venezuela, Brazil, Cayenne, and Surinam.

Habits. According to Schomburgk (*Reis. Guian.* iii. p. 748) this species also nests on the ground and feeds on fruit and insects. Its whistling call is often heard during the night. The "Warraus" call it *Dubquasimo*.

6. *Crypturus dissimilis*.

SALVADORI'S TINAMOU.

(Plate II. fig. 1.)

Crypturus dissimilis Salvad. Cat. B. Brit. Mus. xxvii. p. 541, 1895 (Quonga River); Brabourne & Chubb, B. S. Amer. i. p. 5, no. 42, 1912; iid. Ann. & Mag. Nat. Hist. (8) xiv. p. 320, October 1914.

Crypturus noctivagus Cab. (nec Wied) in Schomb. Reis. Guian. iii. p. 748, 1848.

Adult male. Cinnamon-brown above varied with dark narrow edgings to the feathers on the rump; upper tail-coverts barred with olive and black and edged with buff at the tips; upper wing-coverts paler than the back and inclining to grey, the outer greater coverts dark brown on the outer webs and grey on the inner ones; the inner major coverts for the most part olive with traces of dark cross-bars; bastard-wing, primary-coverts, and quills blackish, some of the innermost secondaries mottled with olive-brown; fore part of head blackish; nape and hind-neck rufous; superciliary line and sides of face pale rufous; throat white washed with rufous; fore-neck, chest, and sides of breast grey; breast and sides of abdomen dull rufous becoming paler

and whitish on the middle of the latter; flanks also dull rufous with dark cross-bars on the lower portion; under tail-coverts black mottled with buff and tipped with white.

Total length 280 mm., culmen 28, wing 155, tail 47, tarsus 59, middle toe and claw 26.

The above description is that of a bird collected on the Kamuni River.

The adult female differs from the adult male in being more rufous on the fore-neck and more barred on the back and wings, and, moreover, by its slightly larger size. Wing 170 mm.

There are two more examples of this species, one collected on Ituribisi River and the other on the Abary River. They are similar to the bird described, but differ in being more barred on the lower back, the white edgings to the wing-coverts on the upper surface paler, and more barred on the under surface.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range restricted to British Guiana. Kamuni River, Ituribisi River, Abary River (*McConnell collection*); Quonga River (*Whitely*); Corentyne River (*Im Thurn*).

Habits. Schomburgk says (*Reis. Guian.* iii. p. 748) that the habits of this bird are the same as those of *C. variegatus*, but he has never found its nest.

7. *Crypturus variegatus*.

VARIEGATED TINAMOU.

Crypturus variegatus (Gmel.), *Syst. Nat.* i. p. 768, 1789 (Guiana); Cab. in Schomb. *Reis. Guian.* iii. p. 748, 1848; Salvin, *Ibis*, 1886, p. 181 (Camacusa, Merumé Mts.); Quelch, *Timehri* (2) iv. p. 326, 1890 (Upper Berbice River); Lloyd Price, *op. cit.* v. p. 68, 1891 (nest and eggs); Salvad. *Cat. B. Brit Mus.* xxvii. p. 535, 1895 (Takutu River); Lloyd, *Timehri* (2) xi. p. 2, 1897; Beebe, *Our Search for a Wilderness*, p. 330, 1910 (Aremu River); Brabourne & Chubb, *B. S. Amer.* i. p. 4, no. 30, 1912.

Crypturus variegatus variegatus Brabourne & Chubb, *Ann. & Mag. Nat. Hist.* (8) xiv. p. 320, October 1914.

"Mamoo Swagger: Small Maam" (*Lloyd*).

Adult. Upper surface including the back, wings, and tail black with orange-buff cross-bars to the feathers; bastard-wing,

primary-coverts, and quills black with buff mottlings and bars on the outer webs of the secondaries ; crown of head black becoming paler on the sides of the face ; hind-neck, sides of neck, fore-neck, and breast chestnut, somewhat paler on the last ; chin white ; sides of the body similar to the upper surface ; abdomen whitish ; the feathers on the lower flanks tipped with white ; under tail-coverts chestnut followed by black and tipped with sandy buff ; marginal under wing-coverts blackish, the inner ones, greater series, and quill-lining silvery grey.

Total length 245 mm., culmen 32, wing 170, tail 47, tarsus 43, middle toe and claw 30.

The description is that of an example obtained on the Makauria River in August 1910.

The male and female are similar in the colour of the plumage, but the female is slightly the larger.

Young. Head and neck covered with down ; forehead, a line over the eye, which widens out on the sides of the hinder crown, sides of face, and throat golden buff ; chin paler and inclining to dull white ; a narrow line of black from the base of the bill to the eye ; crown of head dark chestnut as also a streak from behind the eye extending backward through the ear-coverts ; a narrow line of black feathers, tipped with buffy white, running from the middle of the crown to the nape ; back rufous brown, some of the feathers margined with white ; upper wing-coverts grey with a wash of rufous, edged with white, and a narrow submarginal black cross-bar ; secondaries dark brown, or grey with rufous on the outer webs ; bastard-wing, primary-coverts, and quills dark brown, some of the inner primaries inclining to rufous on the outer webs near the tip ; under surface rufous brown, the feathers narrowly barred with black and edged with white at the tips.

This example was obtained on the Abary River in September 1907.

Another young bird, which still retains a small portion of down on the head and hind-neck, has the upper surface chestnut-brown with minute white spots at the tips of the feathers ; upper wing-coverts paler than the back and edged with white at the tips ; the outer webs of the secondary quills rufous ; fore-neck and breast pale rufous barred with black and tipped with white, somewhat darker on the sides of the breast and sides of body ; paler on the abdomen where the feathers have no black bars, some of

the under tail-coverts dark chestnut with a subapical black spot and tipped with white.

This individual was obtained at Makauria River in August 1910.

An example from the Ituribisi River, which is slightly more advanced in age, has the back almost uniform rufous brown and many of the breast-feathers without a black cross-bar.

A young bird in the collection shows the approach of the blackish feathers on the top of the head and the disappearing of the down; the sides of the head and hind-neck still retain the down; back and wing-coverts rich olive-brown coarsely marked with black and spots and bars of golden buff; a large amount of black is seen on the feathers of the breast and sides of the body which are more or less olive-brown, becoming paler and almost pure white on the middle of the abdomen; under tail-coverts pale buff marked with rufous and black.—Ituribisi River, October 1908.

A second young specimen from the same locality, which also retains down on the head, has the back almost uniform chestnut, and the black marks, so conspicuous in the other bird, scarcely observable in this one; the breast and sides of body pale rufous with scarcely a trace of black on any of the feathers; under tail-coverts rufous marked with black and tipped with white.

The series of adult birds shows great variation of colour on the under surface, some birds are almost entirely rufous, while others display a great deal of white. There appears to be great variation of colour on the under tail-coverts—for instance, while some are black tipped with buff others are entirely buff with longitudinal black or chestnut markings.

We do not understand Count Salvadori's remark concerning the female of this species, which he says differs from the male by having two rufous bands on the feathers. We have compared a series of twenty examples, both male and female, and find that all have two bands on each feather.

Breeding-season. "This bird seems to have no particular breeding season" (C. A. Lloyd).

Nest. "It nests on the ground in a hollow scratched out by itself" (Schomburgk). "Makes no attempt at a nest at all but deposits its single egg on the ground at random" (C. A. Lloyd).

Eggs. "Lays but two eggs of a chocolate colour" (H. Lloyd

Price). "In colour they are deep chocolate, washed with pinkish violet" (C. A. Lloyd).

"It is asserted that this bird occasionally lays two eggs, but as we have never met with an instance, most likely the eggs of another Small Maam have been mistaken for it" (C. A. Lloyd, Timehri (2) xi. p. 2).

Range in British Guiana. Mount Roraima, Ituribisi River, Supenaam River, Bartica, Kamakabra River, Bonasika River, Makauria River, Abary River, Mazaruni River, Kamuni River, Great Falls, Demerara River, Aurora Creek, Tiger Creek (McConnell collection); Takutu River, Mount Roraima, Merumé Mountains, Kamakusa, Bartica (Whitely); Upper Berbice River (Quelch); Aremu River (Beebe).

Extralimital Range. Venezuela, North Brazil.

Habits. Schomburgk (Reis. Guan. iii. p. 748) says that this bird is found throughout British Guiana. It lives on the ground and he supposes that it roosts in trees, but is not certain. It nests on the ground in a hollow scratched by itself. The brooding bird sits very close on the egg and does not leave it on the approach of a human being. During the day one often hears its wailing whistling call sounding through the woods. The "Arekunas" and "Macusis" call it *Woreiwa*.

Regarding this bird, Mr. C. A. Lloyd (Timehri (2) xi. p. 2, 1897) writes:—"Another of the Tinamous, the 'Mamoo Swagger' of the 'Bovianders,' *Crypturus variegatus*, makes no attempt at a nest at all but deposits its single egg on the ground at random. This bird seems to have no particular breeding-season, as its eggs can be obtained throughout the year. In colour they are deep chocolate, washed with pinkish violet, and are so curious that when once seen they cannot easily be forgotten. Unlike its larger congener which roosts on trees, the Mamoo Swagger passes the night on the ground, and is never seen to perch, in fact its small weak feet preclude its being able to do so. It is asserted that this bird occasionally lays two eggs, but as we have never met with an instance, most likely the eggs of another small Maam have been mistaken for it."

Mr. J. J. Quelch, writing from the Upper Berbice River (Timehri (2) iv. p. 326, 1890), remarks that several of the "Small Maam" were obtained, whose flesh afforded a welcome relief from the tinned meats.

8. *Crypturus simplex*.

MODEST TINAMOU.

(Plate II. fig. 2.)

Crypturus simplex Salvad. Cat. B. Brit. Mus. xxvii. p. 531, 1895 (Rupuruni River).

Crypturus adspersus (nec Temm.), Brabourne & Chubb, B. S. America, i. p. 4. no. 29 part, 1912.

Crypturus adspersus simplex Brabourne & Chubb, Ann. & Mag. Nat. Hist. (8) xiv. p. 319, October 1914.

Adult. Nape, hind-neck, and back cinnamon-brown minutely freckled with black, becoming paler on the upper wing-coverts, outer webs of the secondary quills, upper tail-coverts, and tips of tail-feathers; bastard-wing, primary-coverts, and quills pale brown; fore part of head greyish brown; sides of face and throat ash-grey, paler on the throat and darker on the ear-coverts; fore-neck and sides of breast pale grey with almost obsolete minute black frecklings, becoming uniform dull white on the middle of the breast and abdomen; lower flanks and thighs isabelline, with dark brown wavy cross-bars; under tail-coverts fulvous coarsely marked with black; marginal under wing-coverts dark brown, the inner ones, greater series, and quill-lining pale ash-grey, the last pale brown along the shafts.

Total length 335 mm., culmen 30, wing 182, tail 53, tarsus 50, middle toe and claw 35.

The bird described above was collected by Mr. McConnell during his expedition to the Great Savannas in 1894.

The male and female are similar in colour of plumage, but the female is rather larger in size.

Breeding-season. Unknown.

Nest. Unrecorded.

Eggs. Undescribed.

Range confined to British Guiana. Great Savannas, Supenaam River (*McConnell collection*); Rupuruni River (*Whitely*).

Order GALLIFORMES.

Family CRACIDÆ.

The Cracidae or Curassows are large birds ranging in size from the Capercaille to a small fowl. They are only known to occur in Central and South America and are represented in British Guiana by six genera and nine species.

Genus **CRAX** Linn.

Crax Linné, Syst. Nat. 10th ed. p. 157, 1758. Type *C. nigra* Linn.

The diagnostic characters of this genus are the unfeathered lores, the depth of the upper mandible being greater than its width, the crest-feathers curled forward, the tail-feathers twelve in number, and the tail shorter than the wing.

9. **Crax nigra.**

CRESTED CURASSOW.

Crax nigra Linn. Syst. Nat. 10th ed. i. p. 157, 1758 ("Habitat in America australi").

Crax alector Linn. Syst. Nat. i. p. 269, 1766 (Cayenne); Cab. in Schomb. Reis. Guian. iii. p. 746, 1848; Brown, Canoe and Camp Life, pp. 187, 345, 1876; Salvin, Ibis, 1886, p. 174 (Camacusa); W. L. Scater, Ibis, 1887, p. 318 (Pomeroon River); Quelch, Timehri (2) iv. p. 326, 1890 (Upper Berbice River); Ogilvie-Grant, Cat. B. Brit. Mus. xxii. p. 475, 1893 (Demerara); Lloyd, Timehri (2) xi. p. 4, 1897; Beebe, Our Search for a Wilderness, pp. 332, 335, 389, 1910 (Aremu); Brabourne & Chubb, B. S. Amer. i. p. 8, no. 74, 1912.

"Powie" (*Brown*) or "Powsie" (*Lloyd*); "Powis" (*Quelch*).

Adult male. Entire upper surface and the greater portion of the underparts black with a purple gloss. The head is ornamented with a crest the feathers of which recoil. The lower abdomen, inner portion of thighs, and under tail-coverts white. "Cere and base of bill yellow, remainder of bill horn-blue; feet horn-colour."

Total length 800 mm., culmen from cere 38, wing 365, tail 310, tarsus 110, middle toe and claw 84.

We do not know the exact locality of the bird from which the description is taken.

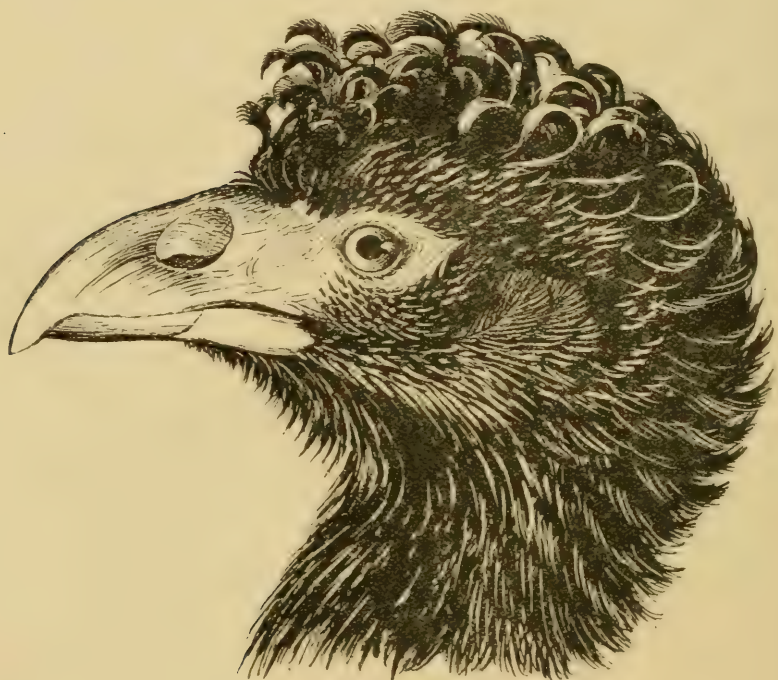
The female differs from the male in having the feathers of the crest barred with white. Wing 338 mm.

Immature. Head, neck, throat, and breast covered with down of a pale chestnut or rufous buff intermixed with longitudinal streaks of black on the head and hind-neck; ear-coverts also black; upper back, wings, and tail blue-black mottled and edged with rufous on the tail-feathers, primary and secondary quills, and median upper wing-coverts; the lower back still retains the nestling down, which is rich chestnut; sides of breast and sides of body dull black, more or less mottled with buff on the latter;

lower breast and abdomen white; flanks and under tail-coverts buff.

The bird from which the description is taken was obtained on the Mazaruni River.

Nestlings in down. Upper surface deep chestnut varied with longitudinal lines of buffy-white on the forehead, sides of the head, and neck, which are bordered and interspaced with black; middle of head, hind-neck, and lower back deep chestnut; a buffy-



Crax nigra.

Fig. 4.—To show the character of the bill and the curled crest.

white line on each side of the back which extends to the tail; the downy upper wing-coverts are broadly barred with ochreous and black in one specimen and rufous and black in the other; primary and secondary quills mottled and edged with buff or rufous; sides of face, fore-neck, and sides of breast pale chestnut; throat, abdomen, and under tail-coverts white; lower flanks and hinder portion of thighs rufous buff.

Breeding-season. "January and February" (*Schomburgk*); "April" (*Brown*).

Nest. "It builds its nest of small sticks in the bushes only a few feet from the ground" (*Schomburgk*); "on the ground under a low bush" (*Brown*); "rough structure placed in a tree" (*Lloyd*).

Eggs. "The eggs are white and two in number" (*Schomburgk*); "white" (*Brown*); "two usually form the clutch, white, rough in structure, and larger than those of any other game-bird" (*Lloyd*).

Range in British Guiana. Bonasika River, Mazaruni River (*McConnell collection*); Taramu and Corentyne Rivers (*Brown*); Kamakusa (*Whitely*); Aremu River (*Beebe*); Maccassoema, Pomeroon River (*W. L. Slater*).

Extralimital Range. Colombia.

Habits. Schomburgk records this species (Reis. Guian. iii. p. 746) as being found in all the woods in British Guiana, singly, in pairs, and in flocks, on the ground, in bushes, and in tall trees, in the last there were always three or four together. Judging from the contents of the stomach, their food consists chiefly of fruit. In January and February, the supposed breeding-season, one often hears their deep sounding growlish cry early in the morning. It builds its nest of small sticks in the bushes only a few feet from the ground. The eggs are white and two in number. When taken young it is easily tamed and represents our fowls with the Indians, though they never lay eggs in captivity. The flesh is most excellent. The "Macusis" call it *Powis* and the "Warraus" call it *Yaruma*.

Mr. C. A. Lloyd (Timehri (2) xi. p. 4) writes:—"One of the roughest of structures is the nest of the Powise, *Crax alector*, which is a platform arrangement, fixed in a tree and so loosely put together that the contents can be easily seen by anyone standing under it. The eggs of the Powise are white and larger than those of any other game bird. The shells are exceedingly rough, looking as if they had been gummed and then sprinkled with sand, or with comfit known as 'thousands,' and allowed to dry. The Powise usually lays two eggs, but it is stated that this number is sometimes increased to four.

"This bird has the odd habit of swallowing bright objects, such as pebbles of coloured quartz, and their gizzards often contain large pieces of the stone. We have seen pieces of bottles and small bits of broken sheet-glass said to have been taken from the

gizzard of one of these birds—a tame one most likely. The edges of the glass had been worn smooth by attrition.’

Mr. Beebe (Our Search for a Wilderness, p. 334) gives the following note:—“Just beyond were three Crested Curassows, a male and two females, the latter busy scratching among the dead leaves, while the male was devoting himself to a most remarkable performance. The splendid bird walks slowly up and down the clear space which he has chosen. The entire body is tilted far forward, the breast low and the wings pointing down in front, the wrist portion or shoulders, as it is often wrongly called, dropping almost to the ground. The wing tips lie flat upon the back, and the tail is raised, while the head is held high, almost touching the back and tips of the wings.”

Mr. Barrington Brown found this bird nesting under a low bush in the valley of the Taramu River in April. The nest contained two white eggs. He also found it in abundance on the Corentyne River (*cf.* Canoe and Camp Life, pp. 187, 345).

Genus **NOTHOCRAX** Burm.

Nothocrax Burmeister, Th. Brasil. iii. p. 347, 1856. Type *N. urumutum* (Spix).

The distinguishing characters of this genus are—the height of the maxilla which is greater than its width, the crest is composed of long recumbent feathers, the lores and space round the eye are naked, and the tail is shorter than the wing.

10. *Nothocrax urumutum*.

NOCTURNAL CURASSOW.

Nothocrax urumutum (Spix), Av. Bras. ii. p. 49, pl. lxii., 1825 (“in sylvis fl. Nigri”); Salvin, Ibis, 1886, p. 174; Ogilvie-Grant, Cat. B. Brit. Mus. xxii. p. 484, 1893; Brabourne & Chubb, B. S. Amer. i. p. 9, no. 83, 1912.

Crax urumutum Cab. in Schomb. Reis. Guian. iii. p. 746, 1848; Brown, Canoe and Camp Life, p. 132, 1876 (Rupununi Savannas).

“Savanna powie” (*Brown*).

Adult. Upper parts dark brown vermiculated, or freckled, with rufous on the back, wing-coverts, outer webs of the quills, and middle tail-feathers, the remainder of the tail-feathers tipped with buffy-white; top of head and crest black; sides of crown, hind-neck, throat, and fore-neck chestnut, becoming paler on the

remainder of the under surface. "Lores and a large naked space surrounding the eye pale yellow above and purplish below; bill scarlet; legs and feet flesh-colour."

Total length 532 mm., culmen 33, wing 290, tail 225, tarsus 88, middle toe and claw, 65.

This species is not represented in the McConnell collection and the description is based on an example in the British Museum obtained at Sarayacu, Ecuador, collected by C. Buckley—Salvin-Godman collection.

Nestling. Blackish above with rufous or buff tips to the feathers and down, becoming paler on the fore-neck; a buff line on each side of the lower back; breast and abdomen creamy-white.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Rupununi Savannas (*Brown*).

Extralimital Range. North Brazil, Eastern Peru, Eastern Ecuador.

Habits. According to Schomburgk (*Reis. Guian.* iii. p. 746) the habits of this species are the same as those of *Crax alector* = *C. nigra*, p. 17.

Mr. Barrington Brown, who observed this bird on the Rupununi Savannas, writes (*Canoe and Camp Life*, p. 132):—"On the way down, at Aringwong village, I saw a tame 'Savanna Powie' (*Crax urumutum*), which differed considerably from the Common Powie (*Crax alector*), but was of nearly the same size. It had a red beak, and chestnut feathers on the part where the Common Powie is white."

Genus MITU Less.

Mitu Lesson, *Traité d'Orn.* p. 485, 1831 Type *M. mitu* (Linn.).

This genus differs in having the crest moderate or well developed, not curled at the tip, the lores feathered, the maxilla elevated, the height being greater than its width, and the legs comparatively long.

Key to the Species.

- | | |
|--|------------------------------|
| A. Culmen much swollen; crest well developed;
tips of tail-feathers white | <i>M. mitu</i> , p. 22. |
| B. Culmen slightly swollen; with scarcely any
signs of a crest; tail-feathers tipped with
rufous | <i>M. tomentosa</i> , p. 22. |

11. *Mitu mitu*.

RAZOR-BILLED CURASSOW.

Mitu mitu (Linn.), Syst. Nat. i. p. 270, 1766 ("Brasilia"); Brabourne & Chubb, B. S. Amer. p. 9, no. 84, 1912.

Urax erythrorhynchus (Swains.), Cab. in Schomb. Reis. Guian. iii. p. 747, 1848.

Mitua tuberosa (Spix), Salvin, Ibis, 1886, p. 174.

Mitua mitu Ogilvie-Grant, Cat. B. Brit. Mus. xxii. p. 485, 1893.

Adult. General colour black glossed with blue; a well-developed crest; sides of face, throat, and neck all round velvety black; tail tipped with white; vent and under tail-coverts chestnut.

Total length 800 mm., culmen (including the swollen knobs) 58, wing 400, tail 300, tarsus 106, middle toe and claw 81.

This species is not represented in the McConnell collection, and the description is taken from a specimen in the British Museum.

The male and female are said to be similar.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. The only record we have of the occurrence of this bird in the Colony is that by Schomburgk ('Reisen Guiana,' iii. p. 747), who states that its habits and mode of life are the same as those of *Crax alector* = *C. nigra*, p. 17.

Extralimital Range. Brazil, Peru, Bolivia.

Habits. Unrecorded in British Guiana.

12. *Mitu tomentosa*.

LESSER RAZOR-BILLED CURASSOW.

Mitu tomentosa (Spix), Av. Bras. ii. p. 49, pl. lxiii., 1825 ("in sylvis paludosis fl. Nigri prope pagum Barcelonam"); Brabourne & Chubb, B. S. Amer. i. p. 9, no. 85, 1912.

Urax tomentosa Cab. in Schomb. Reis. Guian. iii. p. 746, 1848.

Mitua tomentosa Ogilvie-Grant, Cat. B. Brit. Mus. xxii. p. 486, 1893.

Adult. General colour above and below dull black glossed with blue on the head, fore-neck, hind-neck, lesser upper wing-coverts, mantle, and upper back, imparting a waved appearance on the latter; vent, under tail-coverts, and outer portion of the thighs rich chestnut; tail-feathers tipped with chestnut but much paler than the vent and under tail-coverts.

Total length 620 mm., culmen 37, wing 330, tail 292, tarsus 111, middle toe and claw 82.

The bird described was collected at the Upper Takutu Mountains.

Male and female are similar in colour of plumage, but the latter is slightly smaller in size.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Great Savannas (*McConnell collection*); Rupununi River (*Whitely*).

Extralimital Range. North Brazil.

Habits. Schomburgk (Reis. Guian. iii. p. 746) observes:—This beautiful Hokokuhnn inhabits the Savanna only, and most commonly the wooded river-banks of the Savanna, near Takutu and Malm, where it was very common. The “Macusis” and the “Wapisianas” maintain that, when the Southern Cross passes the zenith this bird calls. Its flesh is also good. The “Macusis” and “Wapisianas” call it *Pavituima*. He says that the habits and mode of life are like those of *Crax alector* = *C. nigra*, p. 17.

Genus **PENELOPE** Merrem.

Penelope Merrem, Beyt. bes. gesch. Vögel, pt. ii. pl. xi., 1786. Type *P. jacupema* Merr.

The characters of this genus are: the crest fairly elongate, the width of the maxilla greater than the height, the nostrils exposed and placed forward, the space round the eye naked, the chin and throat naked with a median wattle, the inner web of the outer primary slightly incised, the tail-feathers twelve in number, and the tarsus about equal in length to the middle toe and claw.

Key to the Species.

- A. No superciliary streak; feathers of the cheeks mixed with grey.
 - a'. Larger, wing more than 290 mm., tail more than 250; tarsus more than 70; back deep bluish green; primaries uniform pale brown; abdomen dark bluish green *P. granti*, p. 24.
 - b'. Smaller, wing less than 290 mm., tail less than 250, tarsus less than 70; back olive-green; outer webs of primaries bronze-green in contrast with the inner ones; abdomen dark brown minutely freckled with rufous. *P. marial*, p. 25.
- B. Feathers of the cheeks uniform dark brown; a well-defined superciliary streak *P. jacucaca*, p. 26.

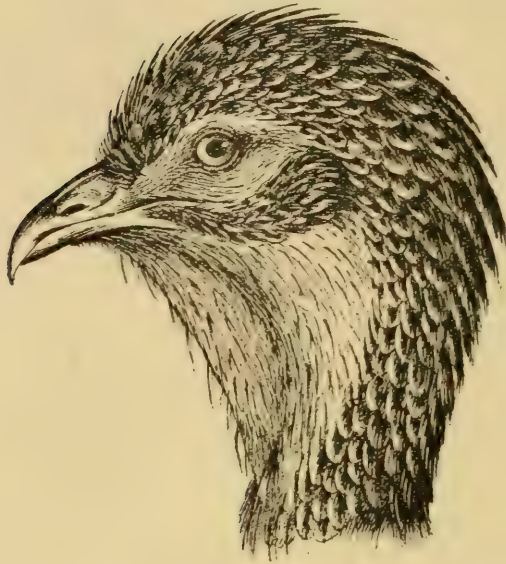


Fig. 5.—To show the bare space round the eye and the wattle on the throat.

13. *Penelope granti*.

GRANT'S GUAN.

Penelope granti Berlepsch, Nov. Zool. xv. p. 297, 1909 (British Guiana); Brabourne & Chubb, B. S. Amer. i. p. 10, no. 94, 1912.

Penelope marial (nec Gmel.), Ogilvie-Grant, Cat. B. Brit. Mus. xxii. p. 495, 1893 (Takutu River); Beebe, Our Search for a Wilderness, pp. 179, 389, 1910 (Hoorie River).

Salpiza marial (nec Gmel.), Cab. in Schomb. Reis. Guian. iii. p. 745, 1848.

Penelope cristata Salvin, Ibis, 1886, p. 175.

Adult. General colour above dark bluish glossy green, the feathers on the head, sides of neck, cheeks, and mantle edged with grey, also some of the lesser upper wing-coverts; outer primaries pale brown; a large bare space round the eye; chin and throat bare, with a few hair-like feathers; fore-neck and breast dark bluish green with white margins to the feathers, which fade away on the abdomen and sides of the body; vent smoky-brown; flanks, thighs, and under tail-coverts dark bottle-green.

Total length 710 mm., culmen 38, wing 300, tail 300, tarsus 81, middle toe and claw 75.

The bird described is from the Ituribisi River.

Male and female similar in plumage, but the female is slightly smaller.

Breeding-season. Unknown.

Nest. Unrecorded.

Eggs. Undescribed.

Range confined to British Guiana. Supenaam River, Bartica, Ituribisi River, Bonasika River, Arawai River, Essequibo River Great Savannas (*McConnell collection*); Annai (*Whitely*).

Habits. Schomburgk (Reis. Guian. iii. p. 745) mentions this bird as having the same habits as those of *Salpiza cristata* = *P. marial*, vide infra, but prefers the woods near the coast.

14. *Penelope marial*.

CAYENNE GUAN.

Penelope marial (Gmel.), Syst. Nat. i. p. 734, 1789 ("gregaria in silvis Gujanae"); Brabourne & Chubb, B. S. Amer. i. p. 10, no. 93, 1912.

Salpiza cristata (nec Linn.), Cab. in Schomb. Reis. Guian. iii. p. 745, 1848.

Penelope greeyi (nec Gray). Salvin, Ibis, 1886, p. 174 (Bartica Grove: Camacusa: Roraima); W. L. Sclater, op. cit. 1887, p. 317 (Pomeroon River).

Penelope cristata (nec Linn.), Quelch, Timehri (2) iv. pp. 324, 326 (Upper Berbice River).

Penelope jacupeba (nec Spix), Ogilvie-Grant, Cat. B. Brit. Mus. xxii. p. 494, 1893 (Quonga: Camacusa); Beebe, Our Search for a Wilderness, pp. 321, 389, 1910 (Aremu).

Adult. General colour of the upper surface dark oil-green; the feathers on the head, superciliary line, and cheeks edged with slate-grey, becoming paler and inclining to white on the feathers of the mantle, upper back, and lesser upper wing-coverts; outer webs of primary-quills bronze-brown; a large bare space round the eye; chin and throat bare, with only a few hair-like shafts; fore-neck and breast dark oil-green, the feathers margined with white; abdomen, flanks, thighs, and under tail-coverts dark brown minutely freckled with rufous, the under tail-coverts being more uniform and glossy.

Total length 600 mm., culmen 30, wing 282, tail 220, tarsus 65, middle toe and claw 61.

The above description is taken from an example obtained on the Ituribisi River.

Male and female very similar in colour of plumage, but the male is slightly larger.

Breeding-season. Unknown in British Guiana.

Nest. "The nest is placed on the ground and in bushes" (Schomburgk).

Eggs. "Two or three white eggs according to the natives" (Schomburgk).

Range in British Guiana. Ituribisi River, Supenaam River, Kamakabra River, Bartica, Bonasika River, Great Savannas (McConnell collection); Bartica, Kamakusa, Mount Roraima, Quonga River (Whitely); Pomeroon River (W. L. Slater); Upper Berbice River (Quelch); Aremu River (Beebe).

Extralimital Range. Cayenne, North Brazil.

Mr. J. J. Quelch (Timehri (2) iv. p. 326) mentions this bird as being very numerous on the Upper Berbice River.

Habits. Schomburgk remarks (Reis. Guian. iii. p. 246) that:—The large number of trees bearing berry-fruit may account for the presence of this Penelope. A very shy species, in fact one can only get within shot when it is feeding, and, as a rule, there are always ten or twelve birds on each tree. Three or four birds can be brought down in succession with a blow-pipe before the rest can get away. When the first victim falls the others look about as if trying to discover what has happened to it, meanwhile others may be killed, and at last the remainder disperse very quickly from branch to branch out of sight. The nest is placed on the ground. As soon as the chicks begin to fly the parents lead them to the bushes and from thence to the branches of trees. Their peculiar shrieking call is heard only in the morning.

Schomburgk also states (Reis. Guian. iii. p. 745) that this species is distributed all over British Guiana. He found it as common in the woods near the coast as in inland woods even near Roraima. It is generally met with in pairs, but not uncommonly in small flocks on tall trees. It is shy like the other members of this genus. It is easily tamed and often found in a domesticated state. The nest is placed on the ground and in bushes; two or three white eggs, according to the natives. The "Macusis" call it *Marasih* and the "Warraus" *Marurih*.

15. *Penelope jacucaca*.

WHITE-FRONTED GUAN.

Penelope jacucaca Spix, Av. Bras. ii. p. 53, pl. lxix., 1825 ("prope Poçoens ençima in sylvis Bahiae"); Salvin, Ibis, 1886, p. 175; Ogilvie-Grant, Cat. B. Brit. Mus. xxii. p. 501, 1893; Brabourne & Chubb, B. S. Amer. i. p. 11, no. 101, 1912.

Salpiza jacucaca Cab. in Schomb. Reis. Guian. iii. p. 745, 1848.

Adult male. General colour above and below bronze-brown, darker on the nape, hind-neck, and back, with white margins to the upper wing-coverts and the feathers on the fore-neck and breast; some of the feathers on the lower breast have rufous edgings. The feathers on the forehead white with dark shaft-lines like those on the cheeks; a broad white eyebrow which extends on to the sides of the neck.

Total length 700 mm., culmen 36, wing 301, tail 263, tarsus 80, middle toe and claw 78.

The description is taken from an example in the British Museum obtained at South-east Brazil.

Adult female. Similar to the adult male.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. "Distributed over the whole of British Guiana up to an altitude of 4000 to 5000 feet" (*Schomburgk*).

Extralimital Range. East Brazil.

Habits. Schomburgk (Reis. Guian. iii. p. 745) writes:—This shy species is also distributed over the whole of British Guiana, and I found it even at an altitude of 4000 to 5000 feet. Its habits are like those of *S. cristata*=*Penelope marial*, p. 25, only it is more often found on the ground. The flesh is very good eating.

Genus **ORTALIS** Merrem.

Ortalis Merrem, Avium Rar. Icon. et Descr. pt. ii. p. 40, 1786. Type *O. motmot* (Linn.).

This genus is characterized by having a large naked space round the eye, sides of throat also naked with a narrow line of hair-like feathers down the middle, the tail rounded and composed of twelve feathers, the middle feathers longest, and the tarsus about equal in length to the middle toe and claw.

16. *Ortalis motmot*.

LITTLE GUAN.

Ortalis motmot (Linn.), Syst. Nat. i. p. 271, 1766 ("Brasilia"); Salvin, Ibis, 1886, p. 175 (Bartica Grove, Roraima); W. L. Selater, Ibis, 1887, p. 317 (Maccasssema, Pomeroon River); Ogilvie-Grant, Cat. B. Brit. Mus. xxii. p. 505, 1893; Brabourne & Chubb, B. S. Amer. i. p. 11, no. 104, 1912.

Ortalia motmot Cab. in Schomb. Reis. Guian. iii. p. 744, 1848; Brown, Canoe and Camp Life, p. 371, 1876 (Wahmara Mts.); Quelch, Timehri (2) iv. p. 320, 1890 (Upper Berbice River).

“Hannaquoi” (*W. L. Slater*).

Adult. General colour above, including the lower hind-neck, entire back, and wings, olive-brown, becoming more rusty brown on the upper tail-coverts; middle tail-feathers rather greener than the back, the three outer pairs on each side for the most part chestnut, the fourth tipped with chestnut; entire head and upper neck all round chestnut; a bare space in front and under the eye; throat bare with a narrow line of black hair-like shafts in the middle; under surface ash-grey tinged with olive on the fore-neck, sides of breast, and lower flanks; under tail-coverts washed with cinnamon rufous. “Bill slate-colour; iris brown; legs and toes purplish pink.”

Total length 535 mm., culmen 26, wing 205, tail 230, tarsus 64, middle toe and claw 58.

The bird described was collected on the Abary River.

Male and female similar in colour and measurements.

Breeding-season. “Probably in April” (*Schomburgk*).

Nest. “Is built on small trees” (*Schomburgk*); “built of sticks on a low tree” (*Brown*).

Eggs. “Two or three white eggs” (*Schomburgk*); “four in number, speckled, little inferior in size to those of a fowl” (*Brown*).

Range in British Guiana. Abary River, Upper Takutu Mountains, Supenaam River, Kamakabra River (*McConnell* collection); Mount Roraima, Bartica (*Whitely*); Pomeroon River (*W. L. Slater*); Demerara River, Wahmara Mountains (*Brown*); Upper Berbice River (*Quelch*).

Extralimital Range. Brazil, Cayenne.

Habits. Schomburgk (Reis. Guian. iii. p. 744) says that this bird is found all over British Guiana. Its habits are like those of *Penelope marialis* (Gmel.), only it appears to be found more often on the ground. It is found fairly common in the open outskirts of the woods and along the banks of the Savanna rivers, but not often in the thick parts of the woods. They are nearly always found in large flocks. The breeding-season is probably in April, during which the male all day long sounds his peculiar loud call. The nest is built on small trees and contains two or three white

eggs, though Schomburgk did not find a nest himself. The "Warraus" call it *Hannaqua* and the "Macusis" *Kangraiba*.

Mr. Barrington Brown found this species breeding on the Demerara River, and gives the following note (Canoe and Camp Life, p. 371):—"We found the nest of a hanaquah (*Ortalida motmot*) containing eggs. The nest was built of sticks on a low tree, and contained four speckled eggs, little inferior in size to those of a fowl. The hanaquah is easily tamed, and is said to breed with common fowls, the hybrid being a very pugnacious bird."

Mr. W. L. Sclater (Ibis, 1887, p. 317) writes:—"The Hannaquoi may be regarded as the Chanticleer of Demerara, for it rouses the sleepy wanderer most effectively by its far-resounding cry of '*hanaquoi!*' from which, of course, it derives its name."

Genus **CUMANA** Coues.

Cumana Coues, Auk, xvii. p. 65, 1900. Type *C. cumanensis* (Jacquin).

This genus is distinguished by having the first and second primaries deeply incised, the tarsus shorter than the middle toe and claw in length, a well-developed crest of pointed feathers, the lores and the space round the eye naked, the throat also naked, with a few hair-like feathers and a median wattle, and the tail composed of twelve feathers rather long and rounded, the outer pair shorter than the middle ones.

17. *Cumana cumanensis*.

WHITE-HEADED GUAN.

Pipile cumanensis (Jacquin), Beytr. Gesch. Vögel, p. 25, pl. x., 1784 (Orinoco); Salvin, Ibis, 1886, p. 175; Ogilvie-Grant, Cat. B. Brit. Mus. xxii. p. 517, 1893 (Takutu River).

Penelope pipile (Jacq.), Cab. in Schomb. Reis. Guian. iii. p. 745, 1848; Brown, Canoe and Camp Life, pp. 180, 345, 1876.

"White-headed Maroodie" (*Brown*).

Adult male. Upper and under surface glossy blue-black; head and crest smoky-white, becoming brown at the ends of the feathers on the nape; upper wing-coverts partially white, especially the outer greater and median series; the feathers of the breast more or less margined with white; marginal under wing-coverts black

and white; a bare space round the eye; chin and throat sparsely covered with black hair-like feathers; cheeks and ear-coverts black. "Bill black, cere and naked skin round the eye and

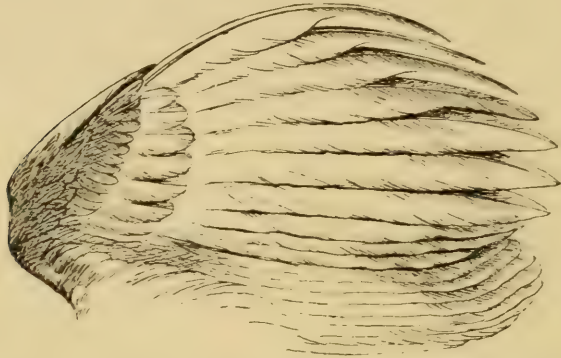


Fig. 6.—To show incised primary quills of *C. cumanensis*.

nostrils white streaked with blue; naked skin and wattle on throat dark blue; eye dark red-hazel; legs and feet Indian-red, claws brownish black."

Total length 600 mm., culmen (exposed portion) 36, wing 320, tail 250, tarsus 73, middle toe and claw 70.

The description is based on an example collected on the Pomeroon River.

Adult female. Similar to the adult male, but smaller.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Pomeroon River (*McConnell collection*); Takutu River (*Whitely*); Burroburro River (*Brown*).

Extralimital Range. Venezuela, Colombia, Ecuador, Eastern Peru, Bolivia.

Habits. Schomburgk (*Reis. Guian.* iii. p. 745) remarks:—This beautiful bird is also distributed all over British Guiana. It is equally as common near the coast as inland; is generally in pairs on tall trees. It is more shy than *Salpiza jacuacaca*, but like that species is easily tamed. I did not find its nest. The "Macusis" call it *Cuyu* and the "Warraus" *Quahenne*.

We have taken the following extract from Mr. Barrington

Brown's work, 'Canoe and Camp Life in British Guiana,' p. 345 :—"The white-headed maroodie makes an extraordinary rattling noise with its wings in early morning and late in the evening, evidently amusing itself or following a custom of its kind, for when it likes it can fly noiselessly enough. I examined their wings and found that the males have four curiously shaped feathers at the tip of each wing with which they make this noise.

"The end portion of these feathers is stiff with very short penules. The white-headed females have only three of these feathers in each wing, which are not so intensely modified as in the male; while the male of the common kind (*Penelope cristata*) has only two of these feathers in each wing, which are modified in a less degree than those in the females of the white-headed species."

Family ODONTOPHORIDÆ.

The birds that compose this family are rather small, ranging in size from the Common Partridge to that of the Quail, and are said to represent the hazel-grouse of Europe.

Their distribution is South, Central, and North America. In British Guiana two genera are represented by one species each.

Genus EUPSYCHORTYX Gould.

Eupsychortyx Gould, Monogr. Odontoph., Introd p. 15, pl. x. pt. 1, 1844. Type *E. cristatus* (Linn.).

In this genus there is a well-developed crest. The first primary is slightly longer than the eighth, and rather shorter than the ninth, the fourth being longest. The tarsus is shorter than the middle toe and claw. The wing is nearly twice the length of the tail in *E. sonninii*, which is the only species of the genus recorded in British Guiana.

18. *Eupsychortyx sonninii*.

SONNINI'S CRESTED QUAIL.

Perdix sonninii Temm. Pig. et Gall. iii. pp. 451, 737, 1815 (Guiana).
Ortyx cristatus (nec Linn.), Cab. in Schomb. Reis. Guian. iii. p. 747, 1848; Brown, Canoe and Camp Life, p. 268, 1876 (Rupununi Savannas).

Eupsychortyx cristatus (nec Linn.), Salvin, Ibis, 1886, p. 175.

Eupsychortyx sonninii Ogilvie-Grant, Cat. B. Brit. Mus. xxii. p. 409, 1893 (Quonga River); Brabourne & Chubb, B. S. Amer. i. p. 13, no. 127, 1912.

Adult male. Upper parts vinaceous grey freckled with black, white, and chestnut, the inner margins of the scapulars and innermost secondaries margined with white or buffy-white; primary-quills uniform pale brown on the inner webs, mottled with buffy-white on the outer ones; top of head, crest, and ear-coverts greyish brown; forehead whitish; throat and a line on the sides of the



Eupsychortyx sonninii.

Fig. 7.—To illustrate the crest.

nape chestnut; sides of neck deep chestnut spotted with white; breast vinaceous with black and white spots; remainder of the under surface white or buffy-white, with dark brown and chestnut intermixed.

Total length 190 mm., culmen 14, wing 101, tail 50, tarsus 27, middle toe and claw 29.

The above description is taken from an example obtained on the Abary River.

Adult female. Differs from the adult male in having the crest darker, scarcely any chestnut on the throat, and the breast dark brown barred with buffy-white. Wing 98 mm.

Breeding-season. Not recorded in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Takutu Mountains, Abary River, and Great Savannas (*McConnell collection*); Quonga (*Whitely*); Cotinga River, Rupununi Savannas (*Brown*).

Extralimital Range. North Brazil and Venezuela.

Habits. Schomburgk remarks (*Reis. Guian. iii. p. 747*):—This beautiful bird inhabits the Savanna in British Guiana only, where I found them in flocks from twelve to eighteen on the edges of the oasis, never venturing more than sixteen to twenty yards out into the open Savanna. As soon as they saw danger they immediately ran, or flew, back to the oasis. They are said to lay their eggs on the ground. I have never seen them sitting on bushes. Their flesh is excellent. The “Macusis” and the “Arekunas” call it *Tsackih*, and the “Warraus” *Behesurae*.

Mr. Barrington Brown, when on the Cotinga River, states that (*Canoe and Camp Life, p. 268*) “Small coveys of Quail (*Ortyx cristatus*) frequent these savannas, which are most delicious eating when roasted on a stick over the fire.”

Genus ODONTOPHORUS Vieill.

Odontophorus Vieillot, *Anal. nouv. Orn. p. 51, 1816.* Type *O. guianensis* (Gmel.).

In this genus the sexes are almost alike. The first primary is longer than the ninth and a little shorter than the tenth; the fourth or fifth being the longest. The tarsus is about equal to the middle toe and claw. The wing is more than twice the length of the tail.

19. *Odontophorus guianensis*.

GUIANA PARTRIDGE.

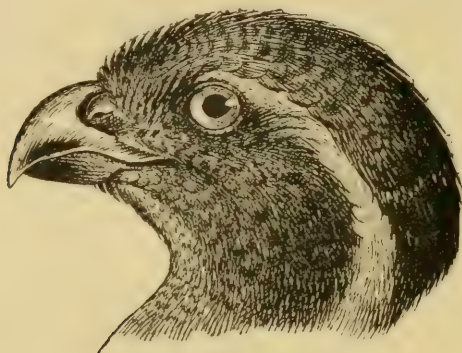
Odontophorus guianensis (Gmel.), *Syst. Nat. i. p. 767, 1789* (Cayenne); *Cab. in Schomb. Reis. Guian. iii. p. 747, 1848*; *Brown, Canoe and Camp Life, p. 371, 1876* (Wahmarra Mountains); *Salvin, Ibis, 1886, p. 175* (Merumé Mountains, Bartica Grove, Camacusa); *Ogilvie-Grant, Cat. B. Brit. Mus. xxii. p. 432, 1893*; *Lloyd, Timehri (2) xi. p. 2, 1897*; *Beebe, Our Search for a Wilderness, pp. 340, 341, 1910* (Aremu River); *Brabourne & Chubb, B. S. Amer. i. p. 13, no. 130, 1912.*

“Duraquara” (*Lloyd & Brown*); “Douraquara” (*Beebe*); “Guiana Quail” (*Beebe*).

Adult male. Upper surface black finely freckled with grey on the mantle and with rufous brown on the lower back, upper tail-coverts, and tail, more coarsely marked with buff and white on

the wings, scapulars, and back ; head black barred with chestnut ; base of forehead, chin, and cheeks chestnut ; a cinnamon-coloured patch behind the eye ; lower throat more or less grey like the mantle ; breast, sides of body, and under tail-coverts chestnut-brown marked with white, or buffy-white, and black, becoming paler and more ochraceous on the middle of the abdomen. "Bill bluish black ; feet and toes bluish lead-colour ; iris hazel ; bare space round the eye vermillion."

Total length 255 mm., culmen 20, wing 148, tail 58, tarsus 43, middle toe and claw 42.



Odontophorus guianensis.

Fig. 8.—To show the form of the bill.

There appears to be considerable variation of colour in this species, some being almost uniform ochraceous on the breast and abdomen.

The specimen described was obtained on the Bonasika River.

Male and female similar in colour of plumage, but the female rather smaller in size. Wing 136 mm.

Young in down. Upper surface dark chestnut ; throat golden yellow ; remainder of the underparts white tinged with chestnut.

Immature. Head dark rufous brown with pale shaft-lines ; mantle grey vermiculated with brown and streaked with white ; scapulars black, brown, and grey with irregular white shaft-lines ; wings and tail much the same as in the adult but the colours not so strongly pronounced ; lower back grey, the feathers of the rump pale rufous brown with a dark central spot ; upper tail-coverts pale rufous ; ear-coverts dark rufous brown ; sides of face

and superciliary line, sparsely covered, buff; throat whitish; breast and abdomen rufous brown with black bars or spots to the feathers; downy under tail-coverts dusky tinged with rufous.

Breeding-season. Unrecorded in British Guiana.

Nest. "Built of leaves and twigs and placed under a low shrub on the ground" (*Brown*); "the nest is made on the ground" (*Schomburgk*).

Eggs. "Eight in number, white" (*Brown*); "as many as fourteen eggs are sometimes found" (*C. A. Lloyd*); "six to eight white eggs" (*Schomburgk*).

Range in British Guiana. Ituribisi River, Supenaam River, Bartica, Kamakabra River, Bonasika River, Anarica River, Demerara River, Tiger Creek (*McConnell* collection); Aremu River (*Beebe*); Wahmarra Mountains, Demerara River (*Brown*); Merumé Mountains, Kamakusa, Bartica (*Whitely*).

Extralimital Range. North-east Brazil.

Habits. Regarding this bird, Schomburgk writes (*Reis. Guian.* iii. p. 747):—"Lives only in thick woods and up to an altitude of 3000 feet. The young must leave their parents shortly after they are hatched, as I nearly always found this species singly or in pairs. Just before dawn and sunset one hears their peculiar far sounding call-note, which the Indians imitate for the purpose of decoying them within gunshot. It seems to me that it is only the males that call. The nest is made on the ground, and they lay from six to eight white eggs. The settlers and natives call it *Duraquarra*, the "Macusis" *Dokorra*, and the "Warraus" *Dakarre*; this word much like its call-note.

Mr. Barrington Brown, who found this bird breeding on the Demerara River, writes (*Canoe and Camp Life*, p. 371):—"We found the nest of a 'Duraquara' (*Odontophorus guianensis*) containing eggs. The nest was built of leaves and twigs, placed under a low shrub on the ground, and was roofed over, having a small entrance in front. It contained eight white eggs, in size between those of a fowl and pigeon."

Mr. C. A. Lloyd (*Timehri* (2) xi. p. 2) writes:—"Of all our game-birds the 'Duraquara,' *Odontophorus guianensis*, seems to be the most prolific, as many as fourteen eggs being sometimes found in a nest, which, like that of the large Maam, is a shallow depression near to some tree-root, having an arched approach of about a foot in length, formed by the bending inward of grass

blades and twigs. The entrance to this is always carefully concealed, and the eggs, which are white, are about the size of those of the domesticated pigeon."

Mr. Beebe (Our Search for a Wilderness, pp. 340, 341) observes:—"This I found wholly by accident as I was watching a dragon-fly which had been injured by a small flycatcher. Good sized pieces were bitten out of the two hind wings and one of the others was doubled and broken. Yet the brave little insect was far from giving up and managed to fly slowly, albeit with a heavy slant to one side, the loose wing making a whizzing sound as it vibrated. I followed to see its ultimate fate. As it passed the end of a log a green lizard leaped from a leaf and seized the unfortunate insect in mid-air, thus typifying the *anlaga* of bird flight. The lizard fell full length upon a rounded pile of dead leaves, and like a bomb there shot forth a whirring form of the Quail, which scaled off between the trees.

"We found the *Douraqnara* had rocketted from a tunnel about a foot in length, made of twigs and dead leaves, which led to a round hidden nest-cavity containing four white eggs, one of which was broken. On the following day the Quail had removed all trace of the broken egg and shell. So completely was the nest a part of the jungle floor that never except by accident would we have discovered it."

Order COLUMBIFORMES.

Familý COLUMBIDÆ.

The family of Pigeons are birds of medium size, varying from that of the Common Fowl to the Common Song-Thrush. Their plumage is usually smooth. The chief distinction, however, is the peculiar bill with its fleshy basal portion and the swollen dertrum.

The Pigeons are found nearly all over the world; about seventy species occur in South America, fifteen of which are represented in British Guiana.

Genus COLUMBA Linn.

Columba Linné, Syst. Nat. 10th ed. i. p. 162, 1758. Type *C. ænas* Linn.

This genus is distinguished by having the upper portion of the tarsus feathered and the first primary-quill longer than the sixth.

Key to the Species.

A. No white nuchal collar.

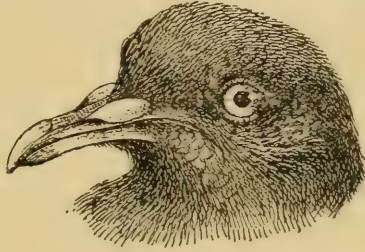
a'. Under tail-coverts with dark edges ... *C. speciosa*, p. 37.*b'*. Under tail-coverts uniform grey *C. rufiga*, p. 38.*c'*. Under tail-coverts uniform vinous brown *C. purpureotincta*, p. 40.B. A narrow white nuchal collar; under tail-coverts grey tinged with vinous ... *C. albilinea*, p. 39.

Fig. 9.—To illustrate the form of the bill.

20. *Columba speciosa*.

SPLENDID PIGEON.

Columba speciosa Gmel. Syst. Nat. i. p. 783, 1789 (Cayenne); Cab. in Schomb. Reis. Guian. iii. p. 743, 1848; Salvin, Ibis, 1886, p. 173 (Bartica Grove, Camacusa, Roraima); Salvad. Cat. B. Brit. Mus. xxi. p. 281, 1893; Brabourne & Chubb, B. S. Amer. i. p. 15, 1912.

Adult male. Back and wings bright rufous with a purple tinge, becoming duller on the median and greater upper wing-coverts and on the short upper tail-coverts, the long upper tail-coverts dark brown; tail black; primary-coverts and quills dark brown, paler on the outer edges; the feathers on the mantle paler than the back and fringed with green, those on the hind-neck amethystine with a white spot, like the sides of the neck and fore-neck; crown of head and sides of face vinous, throat similar with pale bars to the feathers; breast, sides of the body, and under wing-coverts dull vinous; middle of lower breast and abdomen whitish with vinous edges to the feathers; under tail-coverts white with narrow dark edges. "Bill and feet yellowish; iris dark brown."

Total length 330 mm., culmen 21, wing 180, tail 100, tarsus 25.

Adult female and immature males much duller, inclining to earth-brown above and white, with dusky edges, to the feathers below.

The male bird described was collected on the Mazaruni River.

Breeding-season. Unrecorded in British Guiana.

Nest. "The nest is like other Pigeons" (*Schomburgk*).

Eggs. Undescribed from British Guiana.

Range. Ituribisi River, Bartica, Kamakabra River, Bonasika River, Mazaruni River, Great Falls, Demerara River (*McConnell collection*); Kamakusa, Mount Roraima (*Whitely*).

Extralimital Range. Colombia, Ecuador, Peru, Brazil.

Habits. Schomburgk states that (*Reis. Guian.* iii. p. 743) he met with this Pigeon more commonly in the woods near the coast than those inland. Only during the breeding-season is it found in pairs; afterwards it lives in large flocks. He did not often see it on the ground, and concludes, therefore, that it feeds chiefly on fruit and seeds. The nest is like that of other pigeons. The flesh is good. It is very shy and difficult to obtain.

21. *Columba rufina*.

RUFIOUS PIGEON.

Columba rufina Temm. & Knip, *Pig.* p. 59, pl. 24, 1808-1811 (French Guiana); *Cab. in Schomb. Reis. Guian.* iii. p. 743, 1848; *Salvin, Ibis*, 1886, p. 173 (Roraima, 3500 ft., Bartica Grove); *Queleh, Timehri* (2) ii. p. 363, 1888; (2) v. p. 107, 1891; *Salvad. Cat. B. Brit. Mus.* xxi. p. 287, 1893; *Brabourne & Chubb, B. S. Amer.* i. p. 15, no. 152, 1912.

Adult male. Head, upper back, upper wing-coverts, and breast vinous with an amethystine tinge brighter on the wings and duller on the breast, showing a coppery reflection on the nape; lower back, rump, and upper tail-coverts slate-colour; tail lead-grey at the base, earth-brown at the tip; edge of wing and outer greater wing-coverts lead-grey; bastard-wing, primary-coverts, and quills brown with pale outer edges; cheeks and throat grey; chin whitish; abdomen, under tail-coverts, flanks, axillaries, and under wing-coverts grey, somewhat darker on the last. "Iris red; bill blackish; feet dark red."

Total length 305 mm., culmen 20, wing 187, tail 105, tarsus 27.

The bird described was obtained at Mount Roraima in 1898.

Adult female. Differs from the adult male in being less bright on the upper surface, having the scapulars and greater upper wing-coverts earth-brown, and slightly smaller in size. Wing 170 mm.

Breeding-season. Unrecorded in British Guiana.

Nest. "Like that of other Pigeons" (*Schomburgk*).

Eggs. "Like those of other Pigeons" (*Schomburgk*).

Range in British Guiana. Takutu Mountains, Mount Roraima, Abary River (*McConnell collection*); Bartica, Quonga (*Whitely*); Georgetown (*Quelch*).

Extralimital Range. North-east Brazil, Venezuela, Colombia.

Habits. This species was first recorded in British Guiana by Schomburgk, who remarks (*Reis. Guian.* iii. p. 743) that this bird is little smaller than *C. speciosa* and not so pretty. It occurs higher up the mountains. I have found it at an altitude of 3000 feet. The nest and eggs are like those of other pigeons. When the breeding-season is over it is found in large flocks, and is shot in large numbers by the Indians. It contributed largely to our fare during our stay in Pirrara. In July and August its flesh became so bitter that we could scarcely eat it, which, according to the natives, was caused by certain fruits and seeds upon which it fed. The "Macusis" call it *Wakauka* and the "Warraus" *Kukukae*.

Mr. Quelch writing of this bird says:—"This Common Pigeon may at times be encountered on the outskirts of Georgetown, and along the sea or river border, or may be seen flying overhead."

22. *Columba albilinea*.

WHITE-NAPED PIGEON.

Columba albilinea Bonap. *Consp. Av.* ii. p. 51, 1855 (New Granada); *Salvad. Cat. B. Brit. Mus.* xxi. p. 294, 1893; Brabourne & Chubb, *B. S. Amer.* i. p. 16, no. 154, 1902.

Columba albolineata Gray, *Salvin, Ibis*, 1886, p. 173 (Roraima, 6000 ft.).

Adult male. Back and wings bronze-brown with metallic reflections; bastard-wing, primary-coverts, and quills dark brown; lower back, rump, upper tail-coverts, and tail slate-grey, the last paler at the tip, and with a dark subterminal band; a patch of metallic green on the hind-neck; a narrow white nuchal collar; crown of head, breast, and abdomen dull vinous, paler on the under tail-coverts; sides of face, throat, sides of body, axillaries, and under wing-coverts lead-grey.

Total length 345 mm., culmen 21, wing 195, tail 113, tarsus 26, middle toe and claw 41.

The *McConnell collection* does not possess an example of this species. The description is taken from a specimen in the British Museum obtained at Mount Roraima, 6000 feet, by H. Whitely—*Salvin-Godman collection*.

Adult female. Similar to the adult male. Wing 195 mm.

Breeding-season. Unknown in British Guiana.

Nest. Undescribed in British Guiana.

Eggs. Unrecorded from British Guiana.

Range in British Guiana. Mount Roraima (*Whitely*).

Extralimital Range. Colombia, Ecuador, Peru, Bolivia.

Habits. Unrecorded in British Guiana.

23. *Columba purpureotincta*.

PURPLE-TINTED PIGEON.

Columba purpureotincta Ridgw. Proc. U.S. Nat. Mus. x. p. 594, note, 1887 (Demerara); Brabourne & Chubb, B. S. Amer. i. p. 16, no. 161, 1912.

Columba plumbea Salvin, Ibis, 1886, p. 173 (Bartica Grove, Camacusa); Salvad. Cat. B. Brit. Mus. xxi. p. 323, 1893 (Carimang River, Roraima, Ourumee).

Columba vinacea Temm. & Knip (nec Gmel.), Salvin, Ibis, 1886, p. 173 (Roraima, Bartica Grove, Camacusa).

Adult male. Head, hind-neck, throat, and entire under surface vinous, including the axillaries and under wing-coverts; entire back, wings, and tail earth-brown with a vinous tinge.

Total length 285 mm., culmen 14, wing 178, tail 114, tarsus 18.

The male described was obtained on the Mazaruni River.

Adult female. Similar to the adult male but everywhere duller in the colour of the plumage and show pale lilac spots on the lower hind-neck. Wing 165 mm.

The female described was collected on the Berbice River.

Breeding-season. Unknown in British Guiana.

Nest. Undescribed in British Guiana.

Eggs. Unrecorded from British Guiana.

Range in British Guiana. Ituribisi River, Supenaam River, Bartica, Kamakabra River, Bonasika River, Makauria River, Abary River, Aruparu River, Berbice River, Mazaruni River, Great Falls, Demerara River (*McConnell collection*); Mount Roraima, Kamakusa, Kamarmang River, Ourunei (*Whitely*).

Extralimital Range. Venezuela.

Habits. Unrecorded in British Guiana.

Genus **ZENAIIDA** Bonap.

Zenaida Bonaparte, Comp. List Birds Eur. & N. Amer. p. 41, 1838.

Type *Z. zenaida* (Bonap.).

The chief characters of this genus are—the bill, which is narrow at the base, the scapulars and innermost upper wing-coverts spotted, the tail rounded, and the number of tail-feathers fourteen.

24. *Zenaida vinaceo-rufa*.

WINE-COLOURED DOVE.

Zenaida vinaceo-rufa Ridgw. Proc. U.S. Nat. Mus. vii. p. 176, 1884 (Curaçao); Salvad. Cat. B. Brit. Mus. xxi. p. 389, 1893 (Quonga, Takutu R., Annai); Brabourne & Chubb, B. S. Amer. i. p. 16, no. 164, 1912.

Adult male. Fore part of head, sides of face, throat, and entire under surface, including the under tail-coverts, dull vinous; nape, hind-neck, and sides of the latter grey with coppery reflections; back and scapulars earth-brown with black ovate spots on the outer webs of the scapulars and innermost secondaries, which are also earth-brown; middle tail-feathers like the back, more or less tinged with grey, and a subapical black band; outer tail-feathers for the most part rufous, with grey at the base; marginal upper wing-coverts grey; bastard-wing, primary-coverts, and quills slate-grey, darker towards the tips, where they are edged with pale brown like the edges of the outer webs; a dark elongated spot behind the eye and a narrow black line on the hinder cheeks. "Bill black; feet red; iris black" (*Whitely*).

Total length 203 mm., culmen 17, wing 129, tail 82, tarsus 19.

The bird described was collected at the Upper Takutu Mountains.

According to Count Salvadori, the female is duller, the forehead, sides of the head, and lower fore-neck tinged with pale brown with no vinous colour.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains (*McConnell collection*); Annai, Quonga (*Whitely*).

Extralimital Range. Curaçao and Margarita Islands, Venezuela.

Habits. Unrecorded in British Guiana.

Genus **COLUMBINA** Spix.

Columbina Spix, Av. Bras. ii. p. 57, 1825. Type *C. strepitans* Spix.

This genus is characterized by having the tail longer than half of the wing, the first primary-quill not abruptly attenuated at the tip, and the tail rounded.

Key to the Species.

- A. Under wing-coverts, axillaries, and quill-lining chestnut.
- a'*. Feathers on the fore-neck and breast with dark centres *C. griseola*, p. 42.
- b'*. Feathers on the fore-neck and breast uniform *C. grisea*, p. 43.
- B. Under wing-coverts and axillaries black; quill-lining grey.
- c'*. Primary-quills dark brown; entire under wing-coverts black *C. talpacoti*, p. 44.
- d'*. Primary-quills cinnamon; greater and outer under wing-coverts cinnamon *C. rufipennis*, p. 45.

25. *Columbina griseola*.

SPIX'S GREY GROUND-DOVE.

Columbina griseola Spix, Av. Bras. ii. p. 58, pl. lxxv^a, 1825 ("in sylvis fl. Amazonum"); Brabourne & Chubb, B. S. Amer. i. p. 18, no. 175, 1912.

Chamæpelina passerina (nec Linn.), Cab. in Schomb. Reis. Guian. iii. p. 743, 1848; Salvad. Cat. B. Brit. Mus. xxi. p. 473, 1893 (Quonga, Annai); Quelch, Timehri (2) v. p. 106, 1891 (Georgetown); Lloyd, op. cit. (2) xi. p. 3, 1897.

Adult male. Back, rump, upper tail-coverts, and tail earth-brown, outer tail-feathers grey blackish towards the ends; upper wing-coverts pale vinous with dark violet spots on the median series; scapulars like the back, with a dark violet mark on the outer webs; bastard-wing blackish; primary-coverts blackish, bright chestnut at the base; primary-quills chestnut, outer edges and tips dark brown, the chestnut more restricted to the basal portion on the secondaries, the innermost secondaries like the back; nape and hind-neck grey with darker edges to the feathers; fore part of head, sides of face, and breast pale vinous, with dark centres to the feathers on the latter, which imparts a scaled appearance, becoming paler and more uniform on the abdomen and sides of the body; vent and short under tail-coverts white; the long under tail-coverts brown mottled and edged with white; axillaries, under wing-coverts, and quill-lining bright chestnut.

Total length 155 mm., culmen 14, wing 83, tail 55, tarsus 18.

The above description is taken from an example obtained on the Abary River.

Adult female. Differs from the adult male in its smaller size and the absence of vinous colour in the plumage. Wing 77 mm.

Breeding-season. Unrecorded in British Guiana.

Nest. "Small and flat, usually placed on a low shrub or stump of a tree" (*C. A. Lloyd*). "Placed in solitary bushes" (*Schomburgk*).

Eggs. "Two in number and pearly white in colour" (*C. A. Lloyd*).

Range in British Guiana. Abary River, Upper Takutu Mountains, Great Falls, Demerara River (*McConnell collection*); Quonga, Annai (*Whitely*); Georgetown (*Quelch*).

Extralimital Range. Brazil, Venezuela, Ecuador.

Habits. Schomburgk remarks (*Reis. Guian.* iii. p. 743) that he found this beautiful Ground-Dove in large numbers, more commonly near the coast in open places where there are no woods, especially on lawns in plantations where it procured its food. It is rather shy and flies at the slightest noise to the nearest bushes. Although shy it does not avoid human dwellings. It lives in pairs during the breeding-season and the nest is placed in solitary bushes.

Mr. C. A. Lloyd (*Timehri* (2) xi. p. 3) writes:—"This pretty little Ground-Dove, *Chamæpelis passerina*, deserves mention for the peculiar habit it has of pretending to be wounded when it thinks its nest in danger of being robbed. The nest, which is small and flat, is usually placed on a low shrub or stump of a tree, and never contains more than two pearly white eggs. Should anyone approach it, while the little bird is sitting on her charge, she immediately flutters to the ground and toddles along with an unsteady gait, at the same time drooping one of her wings as if broken. This feint is evidently intended to distract the attention of any would-be enemy. The food of this dove consists chiefly of small seeds which it picks from low weeds on the ground. In the islands the seed of the Mexican poppy, *Argemone mexicana*, and the pink fruit of the 'Turk's head' or globe cactus, *Melocactus communis*, make up its principal fare."

Mr. J. J. Quelch observed the species at Georgetown.

26. *Columbina grisea*.

GREY GROUND-DOVE.

Columbina grisea (Bonn.), Enc. Méth. Ornith. i. p. 252. 1791 (Cayenne); Brabourne & Chubb, B. S. Amer. i. p. 18, no. 176, 1912.

Chamæpelis griseola (nec Spix), Salvin, Ibis, 1886, p. 173 (Yuruaní River, Roraima, 3500 ft.); Quelch, *Timehri* (2) v. p. 106, 1891 (Georgetown).

Chamæpelis minuta (nec Linn.), Salvad. Cat. B. Brit. Mus. xxi. p. 481, 1893 (Quonga, Annai).

Adult male. Entire back, from the mantle to the upper tail-coverts, earth-brown like the scapulars and upper wing-coverts, the scapulars having elongated violet spots on the outer webs; bastard-wing dark brown; primary-coverts and quills blackish with chestnut bases to the former and the inner webs of the latter, the chestnut being more restricted on the secondary quills; the innermost secondaries like the back; tail grey with a broad subterminal black band; head grey; throat, breast, and sides of body dull vinous, white on the middle of the abdomen, and dark grey, with white edges, on the under tail-coverts; axillaries, under wing-coverts, and quill-lining bright chestnut.

Total length 137 mm., culmen 12, wing 75, tail 45, tarsus 14.

Adult female. Differs from the adult male in being slightly smaller in size and paler in colour below. Wing 73 mm.

The birds described were collected on the Abary River.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Abary River (*McConnell* collection); Mount Roraima, Yuruani River, Annai, Quonga (*Whitely*); Georgetown (*Quelch*).

Extralimital Range. Venezuela, Colombia, Brazil.

Mr. J. J. Quelch (*Timehri* (2) v. p. 106) states that he had observed this species at Georgetown.

Habits. Unrecorded in British Guiana.

27. *Columbina talpacoti*.

TALPACOTI GROUND-DOVE.

Columbina talpacoti (Temm. & Knip), *Pig. i. fam. 3*, p. 22, pl. xii., 1808-11 (Brazil); Brabourne & Chubb, *B. S. Amer. i.* p. 18, no. 179, 1912.

Chamapelia talpacoti Cab. in Schomb. *Reis. Guian. iii.* p. 744, 1848; *Salvad. Cat. B. Brit. Mus. xxi.* p. 485, 1893 (Quonga, Annai); C. A. Lloyd, *Timehri* (2) xi. p. 4, 1897.

Adult male. General colour above and below deep vinous, somewhat paler on the under surface; crown of head and nape grey, being somewhat paler on the forehead; with black marks on the outer webs of the scapulars and some of the lesser upper wing-coverts; bastard-wing, primary-coverts, and quills dark

brown; outer tail-feathers for the most part black, the black decreasing in extent towards the middle feathers which are like the back.

Total length 175 mm., culmen 13, wing 90, tail 62, tarsus 16.

Adult female. Differs from the adult male in being earth-brown above and below, including the head, with a vinous wash on the upper and under tail-coverts as also the median and greater upper wing-coverts.

Total length 175 mm., culmen 13, wing 87, tail 60, tarsus 15.

The birds described were obtained on the Abary River.

Breeding-season. Unknown in British Guiana.

Nest. The nesting habits are the same as those of *C. passerina* (Schomburgk) = *C. griseola*, *antea*, p. 42.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Supenaam River, Bartica, Bonasika River, Great Falls, Demerara River, Abary River, Anarica River (*McConnell collection*); Quonga, Annai (*Whitely*).

Extralimital Range. Brazil, Venezuela, Peru, Bolivia.

Habits. Mr. C. A. Lloyd (Timehri (2) xi. p. 4) observes:—"Another member of the genus *Chamaepelia* occurs in the colony. *C. talpacoti* is very common on the Savannah, but we know nothing of its habits."

Regarding this species Schomburgk (*Reis. Guian. iii. p. 744*) states that he met with this Ground-Pigeon near the coast and in the Savannas, though never in such large flocks as *C. passerina*. Near the coast it prefers open slopes devoid of woods. It is found in great numbers associating with *C. passerina* on the Demerara sand-hills. Its call-note is rather melancholy. The nesting-habits are the same as those of *C. passerina* = *C. griseola*, p. 42.

28. *Columbina rufipennis*.

RUFIOUS-WINGED GROUND-DOVE.

Columbina rufipennis Bonap. *Consp. Av. ii. p. 79, 1855* (Carthagena, Colombia); *Brabourne & Chubb, B. S. Amer. i. p. 18, no. 180, 1912.*

Columbigallina rufipennis Beebe, *Our Search for a Wilderness*, pp. 131, 139, 389, 1910 (Georgetown, Hoorie Creek).

Adult. General colour above and below vinous, somewhat paler on the underparts; crown of head ash-grey, with dark spots on

the scapulars and some of the upper wing-coverts, and blackish edges to the feathers of the bastard-wing and primary-coverts; primary and secondary quills chestnut margined and tipped with blackish; central tail-feathers like the back, the outer ones for the most part blackish, under aspect of tail blackish.

Total length 180 mm., culmen 14, wing 88, tail 57, tarsus 16.

"*Female*. Above dull brownish, sometimes tinged with rusty; lower parts plain greyish brown or brownish grey" (Salvadori, Catalogue of Birds in the British Museum, xxi. p. 488).

This species is not represented in the McConnell collection, and the description is taken from an example in the British Museum said to have been collected in Trinidad.

Range in British Guiana. Georgetown and on the Hoorie Creek. (Beebe.)

Extralimital Range. Venezuela, Colombia, Central America north to Mexico.

Habits. Unrecorded in British Guiana.

Genus CLARAVIS Oberh.

Claravis Oberholser, Proc. Acad. Nat. Sci. Philad., June 2, 1899, p. 203.

Type *C. pretiosa* (Ferari-Perez).

The present genus is distinguished by the grey colour of the male, the first primary-quill sharply attenuated at the tip, and the tail about two-thirds the length of the wing.

29. *Claravis pretiosa*.

CINEREOUS DOVE.

Claravis pretiosa (Ferari-Perez), Proc. U.S. Nat. Mus. ix. p. 175, 1886 (Mexico); Brabourne & Chubb, B. S. Amer. i. p. 18, no. 183, 1912.

Peristera cinerea Salvad. Cat. B. Brit. Mus. xxi. p. 491, 1893 (Quonga, Ourumee).

Adult male. General colour above dark slate-grey on the back, wings, and middle tail-feathers; upper wing-coverts, scapulars, and innermost secondaries spotted with black which vary in size and form; bastard-wing, primary-coverts, and quills dark brown, the latter grey on the inner webs; the outer pair of tail-feathers black with a little grey at the base, the next two pairs grey with black

tips; head and entire underparts paler grey than the back; base of forehead and throat whitish.

Total length 190 mm., culmen 16, wing 116, tail 73, tarsus 17.

The above description is taken from an example obtained at the Great Falls, Demerara River.

Adult female. Differs from the adult male in being rust-brown above, with darker brown spots on the upper wing-coverts, and paler rust-brown on the fore-neck. Wing 107 mm.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Bartica, Great Falls, Demerara River (McConnell collection); Quonga, Ourunei (*Whitely*).

Extralimital Range. The greater portion of South America and Central America to South Mexico.

Habits. Unrecorded in British Guiana.

Genus **LEPTOPTILA** Swains.

Leptoptila Swainson, *Classif. Birds*, ii. p. 349, 1837. Type *L. rufaxilla* (Richard & Bernard).

This genus is distinguished by its larger size, olive-brown colour above and pale vinous below, the first primary-quill attenuated at the tip, and the tail more than half the length of the wing.

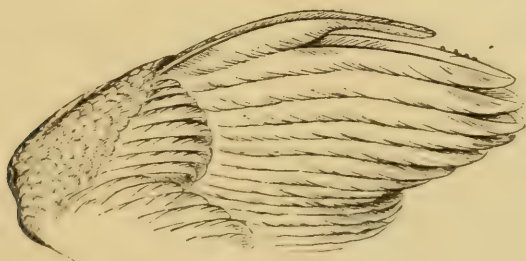


Fig. 10.—To show the incised first primary.

Key to the Species.

- | | |
|---|------------------------------|
| A. Fore part of head, cheeks, and lower throat pale vinous like the fore-neck | <i>L. verreauxi</i> , p. 48. |
| B. Fore part of head bluish grey; cheeks and lower throat rufous in contrast with the fore-neck | <i>L. rufaxilla</i> , p. 48. |

30. *Leptoptila verreauxi*.

RUSTY DOVE.

Leptoptila verreauxi Bonap. Consp. Av. ii. p. 73, 1854 (New Granada);
 Salvad. Cat. B. Brit. Mus. xxi. p. 548, 1893 (Quonga); Brabourne
 & Chubb, B. S. Amer. i. p. 19, no. 189, 1912.

Adult male. General colour above greyish olive-brown including the wings, entire back, and middle tail-feathers; outer tail-feathers blackish tipped with white and fringed with white on the outer web of the outer feather; hinder crown, nape, and hind-neck coppery red with green and purple reflections; forehead, throat, breast, and sides of the body pale vinous becoming white on the lower abdomen and under tail-coverts; axillaries and under wing-coverts bright chestnut like the quill-lining; under surface of tail glossy black tipped with white. "Bill black, iris orange, naked space round the eyes and feet red."

Total length 230 mm., culmen 18, wing 130, tail 101, tarsus 23.

Adult female. Similar to the adult male, but with scarcely any metallic sheen on the mantle. Wing 127 mm.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Abary River, Aurora Creek, Tiger Creek, Great Falls, Demerara River (*McConnell collection*); Quonga (*Whitely*).

Extralimital Range. Colombia, Ecuador, Peru.

Habits. Unrecorded in British Guiana.

31. *Leptoptila rufaxilla*.

GREY-FRONTED DOVE.

Leptoptila rufaxilla (Richard & Bernard), Actes Soc. Hist. Nat. Paris, i. p. 118, 1792 (Cayenne); Salvad. Cat. B. Brit. Mus. xxi. p. 551, 1893 (British Guiana; Quonga, Bartica Grove); Beebe, Our Search for a Wilderness, pp. 131, 139, 389, 1910 (Georgetown, Hoorie Creek); Brabourne & Chubb, B. S. Amer. i. p. 19, no. 191, 1912.

Peristera jamaicensis (Temm.), Cab. in Schomb. Reis. Guian. iii. p. 744, 1848.

Engyptila rufaxilla Salvin, Ibis, 1886, p. 174 (Bartica Grove, Camacusa, Roraima, 3500 ft.); Lloyd Price, Timehri (2) v. p. 66, 1891; Quelch, tom. cit. p. 107.

Adult male. Entire back, wings, and middle tail-feathers

greenish olive-brown with lilac reflections on the mantle, upper back and lesser upper wing-coverts; outer tail-feathers dark brown tipped with white; bastard-wing, primary-coverts, and quills dark brown with pale outer edges to the primary and secondary quills; head slate-grey with a tinge of lilac on the nape; forehead inclining to white; cheeks and lower throat sandy buff; chin white; breast vinous; abdomen dull white; under tail-coverts pure white with dark outer margins; axillaries and under wing-coverts bright rufous like the greater portion of the quill-lining.

Total length 265 mm., culmen 16, wing 143, tail 93, tarsus 33, middle toe and claw 34.

The above description is taken from an example collected at Bonasika River.

Adult female. Similar to the male but duller in coloration. Wing 142 mm. This specimen was obtained on the Demerara River in March 1890.

The young bird differs from the adult by having scarcely any vinous on the breast and the first primary is not attenuated.

Breeding-season. Unrecorded in British Guiana.

Nest. "The nest is built in tall bushes" (*Schomburgk*). Nest placed on the ground at the roots of small trees and bushes (*Lloyd Price*).

Eggs. "Light salmon colour spotted with light brown" (*Lloyd Price*).

Range in British Guiana. Upper Takutu Mountains, Ituribisi River, Supenaam River, Bartica, Mazaruni River, Kamakabra River, Bonasika River, Makauria River, Anarica River, Demerara River (*McConnell collection*); Mount Roraima, Quonga River, Kamakusa (*Whitely*); Georgetown and Hoorie Creek (*Beebe*).

Extralimital Range. North-east Brazil, Colombia, Ecuador.

Habits. According to Schomburgk (*Reis. Guian.* iii. p. 744) this species is distributed all over British Guiana, but it never leaves the darkest part of the wood, where it procures its food on the ground. It is, as a rule, found singly, though occasionally in pairs. The nest is built in tall bushes. Its flesh is good. The "Macusis" call it *Oatoko* and the "Warraus" *Wassibicobo*.

Mr. Lloyd Price writes (*Timehri* (2) v. p. 66) on the nesting of this species:—"Other birds nesting on the ground are the

pretty grey and white ground pigeon (*Eugyptila rufaxilla*), whose eggs, of a light salmon colour spotted with light brown, may be occasionally found at the roots of small trees and bushes."

Genus **GEOTRYGON** Gosse.

Geotrygon Gosse, Birds of Jamaica, p. 313, 1847. Type *G. cristata* (Temm. & Knip).

This genus is chiefly distinguished from *Leptoptila* in having the first primary-quill normal, the legs and feet shorter, and the tail almost square.

32. *Geotrygon montana*.

RED GROUND-DOVE.

Geotrygon montana (Linn.), Syst. Nat. 10th ed. i. p. 163, 1758 (Jamaica); Salvin, Ibis, 1886, p. 174 (Bartica Grove, Camacusa, Merumé Mts., Roraima, 3500 ft.); Salvad. Cat. B. Brit. Mus. xxi. p. 567, 1893 (Bartica Grove); Brabourne & Chubb, B. S. Amer. i. p. 20, no. 203, 1912.

Peristera montana Cab. in Schomb. Reis. Guian. iii. p. 744, 1848.

Adult male. General colour above cinnamon rufous with lilac reflections on the head and upper back; primary-quills rather darker on the inner webs; fore part of the cheeks pale cinnamon buff; hinder cheeks like the head; chin and throat whitish tinged with buff like the feathers on the sides of the upper breast; breast vinous fading into sandy buff on the abdomen, flanks, and under tail-coverts; under wing-coverts cinnamon rufous, quill-lining paler, like the under surface of the tail.

Total length 222 mm., culmen 18, wing 133, tail 73, tarsus 25, middle toe and claw 26.

The bird described above was collected on the Mazaruni River.

Adult female. Differs chiefly from the adult male in being olive-brown above, and the absence of any lilac reflections, which are replaced by a bronzy sheen.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Ituribisi River, Supenaam River, Bartica, Kamakabra River, Bonasika River, Mazaruni River, Makauria River (*McConnell collection*); Mount Roraima, Kamakusa, Merumé Mountains (*Whitely*).

Extralimital Range. Brazil, Ecuador, Peru, Bolivia, Paraguay.

Habits. Schomburgk (Reis. Guian. iii. p. 744) says that this bird is very similar in habits to *Leptoptila rufaxilla* (p. 48) and lives singly or in pairs in the depths of thick woods, where it feeds entirely on the ground. He did not find it nesting.

Order OPISTHOCOMIFORMES.

Family OPISTHOCOMIDÆ.

This single species, which constitutes the Order, resembles more or less the game-bird group, having a similar bill, but has a very long crest, long wings, very long tail, and strong feet with long toes. The chick has highly developed claws on the wings, as shown in Fig. 12, p. 52.

Genus OPISTHOCOMUS Illig.

Opisthocomus Illiger, Prodr. Syst. Mamm. et Av. p. 239, 1881. Type *O. hoatzin* (P. L. S. Müll.).

Distinguished by the same characters as those of the family.

33. *Opisthocomus hoazin*.

HOATZIN.

Opisthocomus hoazin (P. L. S. Müll.), Syst. Nat. Suppl. p. 125, 1776 (Cayenne); Ogilvie-Grant, Cat. B. Brit. Mus. xxii. p. 524, 1893 (Berbice River); Beebe, Our Search for a Wilderness, pp. 366-377, figs. 150-157, 1910 (Arary River); Brabourne & Chubb, B. S. Amer. i. p. 21, no. 212, 1912.

Opisthocomus cristatus (Gmel.), Schomb. Reis. Guian. iii. p. 712, 1848; Brown, Canoe and Camp Life, p. 270, 1876 (Rio Cotinga); id. t. c. p. 371 (Berbice River); Sel. Ibis, 1887, p. 319 (Berbice River); Young, Notes Leyd. Mus. x. pp. 169-173, pl. 8, 1888; Quelch, Ibis, 1888, p. 378 (Berbice River); id. in Timehri (2) ii. p. 363, 1888 (Arary Creek); id. Ibis, 1890, p. 327 (Arary Creek and Berbice River: notes on the habits).

"Anna"; "Hanna"; "Canjé or Stinking Pheasant"; "Governor Battenberg's Turkeys" (Quelch); "Crested Cecilia" (Brown).



Fig. 11.—Head of the Hoatzin.



Fig. 12.—To show the claw on the wing in the young of the Hoatzin.

Adult male. General colour above bottle-green with white shaft-streaks to the feathers of the hind-neck and mantle as also some of the lesser upper wing-coverts, the median and greater coverts edged with white at the tips; outer margin of wing buff; primary-quills chestnut with dark tips, secondaries for the most part bottle-green; lower back blackish, the feathers downy in texture; tail broadly tipped with buff; crest ferruginous with blackish ends; chin, throat, and breast buff; abdomen and sides of body deep chestnut.

Total length 555 mm., culmen 29, wing 310, tail 265, tarsus 53, middle toe and claw 68.

The bird described is from the Abary River.

Adult female. Similar to the adult male.

Breeding-season. "December to July" (*Quelch*).

Nest. "The nests are made solely of a slightly concave mass of dried twigs and sticks taken from the plants on which they are built, and loosely laid on top and across each other, are placed in conspicuous positions high up over the water or soft mud, on the top of or amongst the bushy growth, where they are fully exposed to the direct sunshine" (*Quelch*).

Eggs. "Two eggs seem to be the usual complement; in fact, I was told they never lay more than two eggs at one nesting, but in a few nests there were certainly three eggs" (*Quelch*).

Range in British Guiana. Abary River (*McConnell collection*); Berbice River (*Quelch*).

Extralimital Range. North Brazil, Colombia, Ecuador, Peru, Bolivia.

Habits. Schomburgk, who met with this species (*Reis. Guian.* iii. p. 712), writes:—"I have only once, during my four years' stay in British Guiana, met with this beautiful and proud bird; and that was in the well-wooded borders of the Takutu River. I found a flock of several hundreds. They kept up a continuous cry, and thus betrayed themselves. They perched on bushes or low trees and chased each other from branch to branch, while others ran about on the ground: the worn tips of the tail-feathers bespeaks the latter habit. The food consists of fruits and berries. It has a peculiar and unpleasant smell, which one is able to detect before seeing the bird. This scent is supposed to be produced by its feeding on Arum leaves. I doubt that, as the leaves have quite a different smell to that of the bird. I do not

know anything of its nesting-habits. The 'Warraus' call it *Nah* and the 'Macusis' *Zezira*."

We quote the following notes from Mr. J. J. Quelch (Timehri (2) ii. p. 363):—"It was somewhat of a surprise to me to find the Canjé Pheasant or Hoatzin (*Opisthocomus cristatus*), locally called 'Hanna,' along the creek, and apparently as plentiful here as they are in the Berbice River and the Canjé Creek. The explanation of their presence is most likely to be found in the fact of there being a water communication between the Abary and the Berbice at some distance up, along which the birds have spread almost throughout the whole course of the Abary."

(Timehri (2) iv. p. 313):—"This is the curious reptilian bird the Hoatzin, locally called Anna, Hanna, and Stinking or Canjé Pheasant. Here and in corresponding parts of the Canjé Creek, which opens into the river below the town, and of the Abary Creek, which communicates with the Berbice by an etaboo, these curious birds may be seen at all times of the year, jumping about and feeding on the fruit and foliage of the mucco-mucco, conrida, and bundoorie pimpler, in the morning and evening, and resting in groups among the denser foliage, sitting on the posterior margin of their *carina sterni* during the heat of the day. Here, on the spreading bundoori pimpler, the various stages of their life-history may be studied—from the eggs, lying two or three together on the loosely placed twigs of their conspicuously built nest, through the young chicks climbing about among the branches by means of bill, feet and clawed wings, to the adult birds which in appearance are not unlike the common type of the pheasant, or, in terms of a colonial bird, a golden-tinted brown maroodie.

"As to the distribution of the birds along the river, they certainly are confined to this lower portion—not a single specimen being met with along the higher reaches."

(Timehri (2) x. p. 259):—"The Hoatzin or Reptilian bird (*Opisthocomus cristatus*), which, being most strictly phytophagous, finds in the leaves or fruit of two or three plants, according to the season, the whole means of subsistence required. Weakness of flight prevents the birds from wandering far from their usual haunts, nor have they any incentive to do so when their food conditions are permanent and secure."

Mr. C. Barrington Brown (Canoe and Camp Life, p. 270)

observes :—" It is the Crested Cecilia, which lives in trees bordering river-edges. Its flight is short and heavy ; it appears to be very clumsy, falling forwards and apparently losing its balance whenever it alights, remaining for a short interval with its wings outspread.

"On bringing the head of a specimen I shot within a few inches of my nose, I inhaled a whiff of its perfume which to me resembled a mixture of bad musk and ammonia."

Mr. Beebe (Our Search for a Wilderness, p. 28) writes :—" Hoatzins—the strange reptile-like living fossils, which are found only in this part of the world, and which are closely related to no other living bird. As we draw near, the birds flutter through the foliage as if their wings were broken. We find that this is their usual mode of progression, and for a most interesting reason. Soon after the young Hoatzins are hatched, and while yet unfledged, they are able to leave the nest and climb about the branches, and in this they are greatly aided by the use of the wings as arms and hands. The three fingers of the wing are each armed with a reptile-like claw, and at the approach of danger the birds climb actively about like squirrels or lizards. . . . They fed chiefly upon leaves, but fish entered into the bill of fare of at least one individual."

The following notes on this species have been quoted from Dr. C. G. Young (Notes Leyden Mus. x. pp. 169-171) :—

"This bird is known also as the stinking pheasant, anna, stinking anna, and van Batenburg's turkey—after a Dutch Governor of years gone by. It gets the name 'stinking' from the peculiar smell, like fresh cow-dung, that comes from its crop or stomach or both, for when the skin is preserved it possesses no smell, and the body when the inside has been removed is quite sweet. Notwithstanding the possibility of removing the smell by removing the bowels, it is never used as food ; consequently it passes its time in peace and plenty.

"It is found in only one place in this country, viz. the Berbice River and one of its branches—the Canje Creek, living together in great numbers on the low bushes that border these waters, especially on a pimpler (*Drepanocarpus lunatus*) that stretches its branches over the muddy water and rises and falls with the tide. Any day in the year they can be seen sitting side by side like love-birds on the branches of this shrub or on the low trees

behind them. They fly from twig to twig, and although I have seen these birds every day for the last six years, I have never seen them extend their flight beyond twenty or thirty yards at one time, and never once saw them on the ground. This inactivity is not the result of inability, for their wings are well developed, and their legs and feet are strong. They never leave the river-sides and their food is the leaves and seeds of this pimpler and of a plant that grows in the water, a kind of gigantic cuckoo-pint, called at home 'lords and ladies,' in this country called 'mucco-mucco' (*Caladium arborescens*). I may mention in passing that there is not a puddle of water in the colony in which this *Caladium* is not found, and *Drepanocarpus lunatus* fringes every river and creek in the country.

"In the middle of March and beginning of April they make a flat nest, like that of a sparrow-hawk, on the top of the low shrubs by placing a few dry sticks together, but so loosely united that one can, when under them, see if they contain eggs or young by simply looking up through them. They lay two, sometimes three, whitish eggs, spotted all over with light and dark rusty-coloured spots, commencing with a blotch at the larger end.

"The egg is about the size of a small hen-egg.

"The young is covered with a light coat of dark brown down. The eyes, bill, feet, claws of feet, and claws on thumb and tip of finger are a dark blue-brown.

"The bill is short, thick, and conical like that of a sparrow, with a slight bend in the upper mandible. The legs are strong, with large strong toes, three directed forwards and one backwards, and have well-developed claws. In the wing the fore-arm is larger than the arm, and the hand is larger than the fore-arm. The thumb is long and well developed, and has a long well developed claw; the point of the wing is developed into a finger, tipped with a claw equal in size to that of the thumb; both the thumb and finger have the power of ab- and ad-duction. As soon as the young escape from the egg they creep about with the assistance of these hands, stretching out their wings and digging these claws into or hooking on to whatever they meet. They have not the power of grasping anything between their finger and thumb. The specimen forwarded with this paper, by means of these claws walked out of a large calabash, which is a basin made out of the skin of a gourd and has a smooth inside."

Notes on the Breeding of the Hoatzin (Ibis, 1888, p. 379).—The following extracts from a letter addressed to Dr. P. L. Selater by Mr. Quelch, of the British Guiana Museum, Demerara, dated March 31st, 1888, will be read with interest :—

“I have just been up to the Berbice River and the Canjé Creek after the Hoatzin. From information given to me I had ascertained that the birds were laying, but that they had only just begun. When I went up by myself and examined the district, I found a considerable number of nests with one, others with two, and a few with three eggs. Two eggs seem to be the usual complement; in fact, I was told they never laid more than two eggs at one nesting, but in a few nests there were certainly three eggs. In not a single nest did I find any young ones, nor did I see any birds about which, from their smaller size, appeared to have been lately hatched. I brought down with me a considerable number of eggs, some quite fresh, and others, so far as I can judge from the appearance of the eggs, in different stages of incubation; and in this respect the conduct of the birds when driven off the nest seemed to me conclusive. The incubated eggs (sixteen) I have put into spirit, forty over proof, and will change soon into fresh spirit. The fresh eggs I am trying to get a hen to hatch out, but I do not know yet whether I shall succeed.

“I am going to wait for another three weeks or so, and then I shall go up and take my zinc pans for the big birds and what chickens and incubated eggs I can find. I am afraid the birds will have to be shot. There is no way of catching them otherwise. They are fairly plentiful along the Canjé Creek and the Berbice River; but there is generally great difficulty in getting close to them, and always so in regard to the nests. These they make among a very prickly, spreading, decumbent sort of shrub or small tree, which grows in the swamps along the water-side in a thick dense mass, and into which it is most tedious and difficult to penetrate. The nests overhang the water, so that from the land it is out of the question to get at them. From the water, again, it is a most tedious process. One has to wade, often up to the thighs, through thick mud, at low tide, and to cut a way into the prickly growth; and then, by pulling down the branch bearing the nest (for it is out of the question to climb), there is a chance of getting the eggs. Often, however, in the process the eggs jerk out; for the nest is perfectly shallow and open, consisting only of a few sticks loosely drawn together. At

high tide it is even more tedious, for the boat has to go where a man otherwise might have gone at low tide, and this necessitates cutting a large channel.

"However, I am going to try my best to send you a satisfactory collection."

On the Habits of the Hoatzin (Opisthocomus cristatus): by J. J. Quelch (Ibis, 1890, p. 327):—

"The observations on which the following notes are based were made in March, May, and October 1888, July 1889, and January 1890; and as they extended over but short periods at each time, no doubt several characteristics have remained unnoted which more continuous attention would have revealed.

"The Hoatzin is known in British Guiana by the various names of 'Anna,' 'Hanna,' 'Canjé, or Stinking Pheasant,' and 'Governor Battenberg's Turkeys'; but in the districts where it is found the name of 'Hanna' is the one most commonly used. These birds are plentifully distributed along the Berbice River above the town of New Amsterdam, along the Canjé Creek, which opens into the Berbice immediately below the same town, and along the Abary Creek, one of the higher branches of which leads into the Berbice River, and along which the birds have most likely spread, by this channel, from the main stream. They are said to extend upward along the Berbice and the Canjé for a considerable distance; but on this point I have no personal knowledge, and reports which I have heard on the subject are conflicting.

"Where the birds are most abundantly found, the banks of the watercourses are lined by a thick, often impenetrable, and variable growth, which is washed and partially swamped by the water at high tide, and is fronted with a wide and deep deposit of soft mud at low water. Among the plants, a prickly and thorny, low-spreading, much-branched, leguminous shrub or tree, commonly known as the 'Bundoorie pimpler' (*Drepanocarpus lunatus*), which stretches out even over the water, rising and falling with it, generally occurs in more or less dense masses, together with the 'courida' (*Avicennia nitida*) and a tall tree-like aroid commonly known as 'mucco-mucco' (*Montrichardia arborescens*), which grows most luxuriantly in the muddy and swampy districts; and the young leaves and the fruits of these plants furnish almost the entire food of these birds. I have never seen

them on the ground, nor feeding on the low weedy growths on its surface.

“Almost invariably, where one or other of the three mentioned plants formed the nearly continuous growth by the water, the birds there shot contained in their crops only the leaves (or fruit) of that plant; but where the plants were mingled, sometimes one and sometimes another had been eaten.

“This dense lining growth furnishes the home of the birds. In the early morning or the late afternoon they will be seen sitting in numbers on the plants; while towards the middle of the day, as the fierce heat of the sun increases, they betake themselves to shelter, either in the denser recesses of the growths, or among the individual trees of denser foliage, or among the tangled masses of creeping and climbing vines, which frequently spread over considerable areas of their food-plants along the very edge of the water. At this time one may pass, by boat, along the river without the faintest idea of the proximity of the birds, unless a very sharp watch be kept up among the more leafy growths, or unless the report of a gun causes them to utter their curious cry. Late in the evening, after feeding, they will be seen settling themselves down in suitable places for the night.

“The cry of the Hoatzin is easily heard when they are disturbed, and it is one of which it is not easy to give an exact idea. It recalls slightly the shrill screech of the Guinea-bird (*Numida*), but is made up of disjointed utterances, like the notes ‘heigh’ or ‘sheigh’ (*ei* as in ‘sleigh’), pronounced with a peculiarly sharp and shrill nasal intonation, so as to be quite hiss-like. While they are treading, the noise made is considerable, the cry being more continuous and shriek-like.

“Whether from the fact of their occupying situations where they are seldom disturbed or but little likely of being pursued, or from a natural weakness of wing, the birds are but seldom seen in flight; and when they take to the wing during disturbance, they do so but for very short distances—a very exceptional flight being once observed of a length of about forty yards with the wind, across a creek, from a high growth on one bank to a lower level on the other. Usually they rise almost with a jump from the branch, seldom in a straight line, but with a marked convex curve to the point where they alight. The flight of the birds, in spite of their great expanse of wings in relation to the weight of the

body, is thus extremely awkward, and the body presents a peculiarly humped appearance. During their longer courses the wings are rapidly and violently flapped.

“When suddenly disturbed, as by the discharge of a gun amongst a group of them, they fly or spring away for distances of but a few feet, while those in the immediate vicinity show no other signs of alarm but the loud utterance of their shrill cry. While springing from place to place, when they are feeding or alarmed, they keep their wings fully expanded, and inclined almost vertically when they have first alighted, thus balancing themselves, the crest being then erect and the tail raised and expanded. It is at such times especially that their plumage presents a really beautiful aspect, in spite of their sober colouring.

“The apparent awkwardness in placing themselves when they alight is chiefly due, I believe, to the smallness of the branches on which they usually settle, and which they are unable firmly to grasp with their long toes, balancing themselves meanwhile by the expanded wings and tail; but it is also attributable, I think, though to a much less degree, to a certain weakness in their legs—even though these are thick and apparently strong-looking,—since when they alight on a thick limb a certain amount of instability is still manifest.

“This weakness of limbs seems to be still more evidenced by the method of perching characteristic of the birds. At any time during the heat of the day they will be found resting on the branches, two or more together, the body directly applied to the wood, and supported on the bare, thickened, and hardened patch of skin which covers the flattened and broadened surface of the posterior termination of the *carina sterni*. This surface of the keel affords a firm base of support, and as the axis of the sternal keel is not parallel with, but markedly inclined to the spine, a slight tilt of the spine from the horizontal brings the axis of the sternum close to the vertical, and allows nearly the full weight of the bird to be thrown on the sternal base, while the body of the bird seems to be quite horizontal, owing to the fact that the enormous looped crop, which is directly and closely applied to the face of the furculum and sternum, causes a bulging of the body in the front to balance the extension of the rump behind. The feet of the bird while grasping the branch here

evidently support but a very small part of the weight of the body, and are more concerned with its equipoise and stability.

"To judge from the conditions under which the birds at present here exist, it would seem that the sluggish habit has been brought about by a weakening of special muscles through disuse. From the nature of their food no prolonged flight is needed in order to procure it; from the nature of their habitat they are little liable to be interfered with or pursued, and, if troubled, they can easily take refuge without prolonged flights. Even by man they are seldom meddled with, except for scientific purposes, since a peculiar and unpleasant odour attaches to the flesh, especially after death, and which seems to be due to the penetration of the fluid and gaseous contents of the digestive tract. On this account they are not generally eaten; but a few cases have been reported to me in which they have been utilized for food.

"The nesting-time of the birds certainly extends from December to July, and I think it very likely that it is continuous throughout the year. From information given to me in 1887, I was led to conclude that March and April were their nesting-months; but as the result of my own observation, chicks are to be found quite early in January, and freshly-laid eggs in the early part of July, as well as the intervening months.

"The nests, which are made solely of a slightly concave mass of dried twigs and sticks taken from the plants on which they are built, and loosely laid on top and across each other, are placed in conspicuous positions high up over the water or soft mud, on the top of or amongst the bushy growth, where they are fully exposed to the direct sunshine. Almost invariably the plants thus built on were the close-growing 'Bundoorie pimpler,' though in a few cases I have seen them on the courida and on a 'pimpler (or prickly) palm' (*Bactris major*).

"In October 1888, along the Abary Creek, when nearly for a fortnight the birds were under observation at frequent intervals, no nests nor young were noticed; but as the Bundoorie pimpler was almost entirely absent, and the lining growth along the water-side consisted of mucco-mucco and other plants, on the top of which it was impossible for the birds to perch, and much more so to make nests, it may well be that they were even then nesting, but in such positions as to be screened from observation.

Believing at that time that the birds only nested from March to May, I made no special attempts to search for nests ; nor have I yet had an opportunity of seeing whether, along the Berbice River and the Canjé Creek, nests are to be found on the Bundoorie pimpler at that time of the year.

“ From the binding nature of the spiny twigs, the nests last for a considerable time, and these are certainly made use of again, possibly after more or less repair. The same nest has been found in use after an interval of seven months.

“ Two or three eggs are laid at a time, both numbers being about equally common in my experience ; and in one special case six eggs were taken from a nest on which one bird had been sitting, but whether they had been laid by one bird or two birds there was nothing to show. The eggs, which vary considerably in size, being usually as large as a small-sized hen's egg, though often a good deal larger or smaller, are easily seen from beneath the nest, owing to its loose structure ; and the whitish eggs, with scattered dark reddish-brown blotches, more closely placed at the obtuse pole, form a marked contrast with the greyish-brown twigs of the nest. Even while the birds are sitting on them, the eggs must be kept fairly cool from below ; and this evidently gives the explanation why a number of freshly laid eggs that were placed to be hatched out by a common fowl exploded one after another, much to the alarm of the foster parent, who, however, stuck to the nest with the remainder after each occurrence.

“ Soon after the hatching of the eggs, the nestlings begin to crawl about by means of their wings and legs, the well-developed claws on the pollex and index being constantly in use for holding and hooking on to the surrounding objects. If they are drawn from the nest by means of their legs, they hold on firmly to the twigs both with their bill and wings ; and if the nest be upset by means of a rod pushed up from below, they hold on to all objects with which they come in contact by means of bill, feet, and wings, making considerable use of the bill, not only to reach objects above them, but also, with the help of the clawed wings, to raise themselves to a higher level. When the parent bird is driven from the nest, owing to the close approach of a boat, generally through an opening cut in the floating Bundoorie pimpler, at high water, or to the cutting and pulling of the branches by some one who has

waded through the soft mud, often up to the thighs, at low water, then the young birds, unless they be only quite recently hatched, crawl out of the nests on all fours, and rapidly try to hide in the thicker bush behind.

“One curious feature noticed with a nestling which had been upset into the river was its power of rapid swimming and diving when pursued. As soon as the hand was placed close to it, it rapidly dived into the dark water, in which it was impossible to see it, and would rise at distances of more than a yard away. Owing to this power the little creature managed to evade all my attempts to seize it, taking refuge eventually far under the bushy growth, where it was impossible to pursue it. The prolonged immersion which a nestling will thus instinctively and voluntarily undergo, or which an adult bird will bear in an attempt to drown it, seems to me to be quite remarkable.

“The nestlings, when resting on the bare sticks of the nest, are observed to rest the weight of the body, as in the adult birds, on the bare and thickened integument of the *carina sterni*, the toes being spread out and the wings generally drawn up to the sides.

“I am unable to state from observation the method of feeding of the nestlings. In very many specimens, when the crops were examined the food was found to consist of a central portion of closely packed pieces of young and thin leaves, apparently both of the courida and the Bundoorie pimpler, surrounded by a finer more pulpy mass, which was thus in contact with the walls of the organ, and which had evidently, from its position, been more acted upon than the central portion. The enclosed pieces of leaves were sometimes nearly three-quarters of an inch in length, quite ragged in outline and much folded—so much so as to give the impression of a finely comminuted mass until they were carefully unrolled. In nestlings of much larger size the food-mass of the crop was considerably more comminuted, but it still contained distinctly recognizable portions of leaves, and often these were from half to three-quarters of an inch in length.

“From the nature of the food contents, I was led to believe that the time of day at which the young birds were procured made a considerable difference as to the state of the food in the crop. The feeding-time of the adult birds is evidently the early and late parts of the day, at which time their crops are found to contain, and especially at their anterior part, quantities of large

pieces of young leaves : and sometimes these pieces consist of a half or nearly an entire leaf, almost unaltered—the pieces packed against and between the wrinkled surface of the immensely developed rugæ being, however, seldom of this nature. Early in the morning and late in the afternoon, before feeding-time, the contents of the crop are but little recognizable, the fragments being considerably altered, as well doubtless by the peculiar warmth and moisture as by the special action of its strong rugæ. If the nestlings are fed by the parent birds with small portions of the young foliage, which, owing to its softness and delicacy, the weakest condition of their jaws would allow them to tear from the bills of their parents, either in large or small portions, the long resting-time during the night and the middle of the day would be sufficient to cause a change in the leaf-pieces corresponding to that produced in the adult birds.

“The nestlings, even when quite small, are frequently found far away from any nest, climbing by the help of their clawed wings, after the parent birds during feeding-time ; and it seems a most likely thing, though I have never directly observed it, that they are then fed with the tender leaves which the parents pluck for them. Failing the proof from direct observation, there seems to be no necessity for concluding that the nestlings are fed by a regurgitation of the food-mass from the crop of the adult birds, as Dr. Young has been inclined to think likely (Notes from the Leyden Museum, vol. x. p. 171).

“It was a very noticeable thing, during the various months when the birds were under my observation, that a very large proportion of those that were shot were by no means in good plumage, a variable number of the quills of the wings and tail, and sometimes the feathers of the crest, and frequently those of the neck and breast, being only in process of growth. So marked was this feature in October 1888, along the Abary Creek, that I was inclined to regard that season as a moulting-period (Timehri, vol. ii. new series, 1888, p. 364) ; since then, however, I have found them in very much the same condition in July 1889 and January 1890.

“This is all that I am at present able to furnish about the habits and breeding of these birds ; but I trust soon to be able to offer some additional notes on a few points that have remained untouched owing to the want of definite information.”

Order RALLIFORMES.

Family RALLIDÆ.

The members of this family are generally distinguished by their laterally compressed bodies and long toes. The bill is of



Rallus longirostris.

Fig. 13.—To illustrate the shape of the bill and the form of the foot.

various shapes, being long in the true Rails, shorter and stouter in the Crakes, and very deep in the Gallinules, the last having the nasal opening pierced in the horny sheath.

The Rails are distributed over the greater portion of the known

world. Fourteen genera and fifty-six species occur in South America, of which nine genera and fifteen species are represented in British Guiana.

Genus **RALLUS** Linn.

Rallus Linné. Syst. Nat. 10th ed. p. 153, 1758. Type *R. aquaticus* Linn.

This genus is characterized chiefly by its long and slender bill, which, in *R. longirostris*, is almost equal in length to that of the middle toe and claw.

34. *Rallus longirostris*.

LONG-BILLED RAIL.

Rallus longirostris Bodd. Tabl. Pl. Enl. p. 52, 1783 (Cayenne); Sharpe. Cat. B. Brit. Mus. xxiii. p. 10, 1894 (Berbice); Brabourne & Chubb, B. S. Amer. i. p. 21, no. 213, 1912.

Rallus crepitans (nec Gmel.), Cab. in Schomb. Reis. Guian. iii. p. 760, no. 213, 1848.

Adult female. Upper surface brown with pale edgings to the feathers, giving a streaked appearance, more narrowly on the head and hind-neck; sides of face, fore-neck, and breast pale rufous; greater upper wing-coverts also tinged with rufous; middle of abdomen buffy-white; sides of body, under tail-coverts, and under wing-coverts brown barred with white.

Total length 340 mm., culmen 53, wing 135, tail 46, tarsus 47, middle toe and claw 56.

Adult male. Similar to the adult female.

The female described was collected at Lamaha.

Breeding-season. Unrecorded in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Lamaha (*McConnell collection*).

Extralimital Range. Cayenne, Trinidad.

Habits. Schomburgk says (Reis. Guian. iii. p. 760) that this species is more generally found in grassy or boggy places and less commonly in woods.

Genus **ARAMIDES** Pucher.

Aramides Pucheran, Rev. Zool. 1845, p. 277. Type *A. cayennensis* (Gmel.).

The members of this genus are of rather large size, with straight bills, strong feet, long toes, and short tails; the middle toe and claw about equal in length to that of the tarsus.

Key to the Species.

- A. Crown of head pale chestnut; throat white tinged with rufous; fore-neck chestnut; axillaries blackish barred with white *A. axillaris*, p. 67.
- B. Crown of head dusky grey; throat white with no rufous tinge; fore-neck grey; axillaries rufous barred with black..... *A. cajanea*, p. 68.

35. *Aramides axillaris*.

VENEZUELAN WOOD-RAIL.

Aramides axillaris Lawr. Proc. Acad. Nat. Sci. Philad. 1863, p. 107 (Barranquilla, New Granada); Salvin, Ibis, 1886, p. 176; Sharpe, Cat. B. Brit. Mus. xxiii. p. 56, 1894; Brabourne & Chubb, B. S. Amer. i. p. 23, no. 228, 1912.

Ortygarchus mangli (nec Spix), Cab. in Schomb. Reis. Guian. iii. p. 760, 1848.

Immature. Head, sides of face, throat, and sides of neck pale rufous tinged with dusky brown on the crown of the head; hind-neck and upper mantle grey; upper wing-coverts, middle of back, and innermost secondaries olive-brown; lower back, rump, and tail dull black; bastard-wing and primary-quills bright chestnut, more or less olive at the tips; under surface, including the thighs, dusky grey with rufous feathers appearing on the breast and abdomen; axillaries and under wing-coverts blackish barred with white; under tail-coverts like the tail. "Bill green, yellowish at base; feet vinous red; eyelids and iris red."

Total length 320 mm., culmen 36, wing 173, tail 55, tarsus 58, middle toe and claw 52.

The immature bird described was collected at Bartica.

Adult female. Head and neck all round, as also the breast, chestnut, paler and inclining to white on the throat; lower hind-neck and mantle slate-grey; back, scapulars, upper wing-coverts, and innermost secondaries olive; primary-coverts and quills chestnut tipped with olive; lower back and upper tail-coverts sooty-brown; tail black; flanks and under tail-coverts blackish; thighs and vent dusky brown; under wing-coverts blackish barred with white; axillaries similar tinged with rufous at the tips.

Total length 310 mm., culmen 41, wing 180, tail 58, tarsus 55, middle toe and claw 55.

The description of the female is taken from an example in the British Museum, collected in Venezuela by Spence-Salvin-

Godman collection. We have not been able to see a male specimen, but, according to Leotaud, the sexes are alike.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Bartica (*McConnell collection*).

Extralimital Range. Trinidad, Venezuela, Colombia.

Habits. Schomburgk states (*Reis. Guian.* iii. p. 760) that the habits and mode of life of this bird are similar to those of *A. cajanea* (see below).

36. *Aramides cajanea*.

CAYENNE WOOD-RAIL.

Aramides cajanea (P. L. S. Müll.), *Syst. Nat. Suppl.* p. 119, 1766

(Cayenne); Brabourne & Chubb, *B. S. Amer.* i. p. 23, no. 230, 1912.

Ortygarchus cayennensis Cab. in Schomb. *Reis. Guian.* iii. p. 759, 1848.

Aramides cayennensis Salvin, *Ibis*, 1886, p. 176 (Bartica Grove, Camacusa).

Aramides cayanea Sharpe, *Cat. B. Brit. Mus.* xxiii. p. 57, 1894 (Bartica Grove); Beebe, *Our Search for a Wilderness*, pp. 378, 389, 1910 (Abary Savannas).

“ Killicow ” (*Beebe*).

Adult female. Crown of head dusky brown; sides of face and entire neck all round slate-grey, paler on the fore-neck; throat whitish; upper wing-coverts, middle of the back, and tertials olive; lower back, tail, flanks, under tail-coverts, and vent dull black, thighs rather paler and more sooty brown; bastard-wing and quills pale chestnut, becoming darker at the tips; breast and abdomen chestnut; axillaries and under wing-coverts black barred with rufous.

Total length 290 mm., culmen 46, wing 172, tail 53, tarsus 69, middle toe and claw 62.

Adult male. Similar to the adult female, but rather larger. Wing 181 mm.

The bird described was collected on the Ituribisi River.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Bartica, Abary River, Anarica River (*McConnell collection*); Kamakusa (*Whitely*).

Extralimital Range. Venezuela, Colombia, Peru, Brazil.

Habits. Mr. Beebe (*Our Search for a Wilderness*, p. 378) gives

the following note :—"Cayenne Wood-Rails were seen every day, but were not abundant. A pair were nesting near the island, and well merited their native name of Killicow, screaming a confused chorus of syllables resembling these for five minutes at a stretch every morning."

Schomburgk states (Reis. Guian. iii. p. 759) that he found this bird most common in the coast-woods, the boggy Avicennien-bush, and the coffee plantations. He met with them in small flocks, which on his approach took to their wings. They appeared to depend on their wings to evade him rather than their feet. Even when running a very short distance their progress was aided by their outspread wings. The "Warraus" call it *Aku* and the "Macusis" *Kosarre*.

Genus **AMAUROLIMNAS** Sharpe.

Amaurolimnas Sharpe, Bull. Brit. Orn. Club, i. p. xxviii, Feb. 1893.

Type *A. concolor* (Gosse).

This genus belongs to the Crakes, which differ from the true Rails by their short bills, but they have long thin toes.

37. *Amaurolimnas concolor*.

UNIFORM CRAKE.

Amaurolimnas concolor (Gosse), Birds of Jamaica, p. 369, pl. 103, 1847 (Jamaica); Sharpe, Cat. B. Brit. Mus. xxiii. p. 87, 1894 (Merumé Mts.); Brabourne & Chubb, B. S. Amer. i. p. 23, no. 235, 1912.

Porzana concolor Salvin, Ibis, 1886, p. 176 (Merumé Mts.).

Adult female. General colour above rufous-brown; bastard-wing, primary-coverts, and quills pale brown with pale rufous edgings on the outer webs; tail like the back; under surface rufous, somewhat paler on the lores, chin, and vent. "Bill yellowish green, blackish above; feet dull purplish crimson or pink; iris vermilion" (*P. H. Gosse*).

Total length 200 mm., culmen 29, wing 120, tail 47, tarsus 41, middle toe and claw 37.

The description is taken from a specimen collected on the Supenaam River.

A male example obtained by H. Whitely at the Merumé Mountains on July 12, 1881, now in the British Museum, is very similar to the female described above.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Supenaam River, Arawai River (McConnell collection); Merumé Mountains (Whitely).

Extralimital Range. Brazil, Peru, Jamaica, Central America—north to Guatemala.

Habits. Unrecorded in British Guiana.

Genus **THYRORHINA** ScL. & Salv.

Thyrorhina Selater & Salvin, P. Z. S. 1868, pp. 443, 458. Type *T. schomburgki* (Cab.).

The chief character of this genus is that the nostrils are not pervious, being separated by a bony septum. The bill is short and the toes long and slender. Wing rounded, the first primary-quill being about equal to the tenth.

38. *Thyrorhina schomburgki*.

SCHOMBURGK'S CRAKE.

Crex schomburgki Cab. in Schomb. Reis. Guian. iii. p. 760, 1848 (British Guiana).

Thyrorhina schomburgki Salvin, Ibis, 1886, p. 176 (Roraima, Merumé Mts.); Sharpe, Cat. B. Brit. Mus. xxiii. p. 125, 1894; Brabourne & Chubb, B. S. Amer. i. p. 24, no. 242, 1912.

Adult male. Upper surface, including the hinder portion of the head, entire back, and tail olive-brown, with black centres to the feathers and ovate white spots, becoming pale rufous on the wings; quills pale brown; forehead, sides of face, and under surface pale rufous; throat and middle of abdomen white, the feathers on the sides of the breast centred with black and ovate white spots. "Feet yellowish" (*Schomburgk*). "Eye reddish hazel; legs and toes red" (*H. Whitely*).

Total length 135 mm., culmen 14, wing 73, tail 34, tarsus 18, middle toe and claw 23.

The sexes appear to be similar, but the material at hand is not sufficient to form a definite conclusion.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Mount Roraima, Abary River, Ireng River (McConnell collection); Merumé Mountains (*Whitely*).

Extralimital Range. Brazil, Venezuela.

Habits. Schomburgk says (Reis. Guian. ii. p. 245) that he obtained this bird in the vicinity of Mount Roraima. He always found them in pairs. It is easily caught, as its feeble powers of flight only allowed it to remain on the wing for a short time. He kept a pair in captivity for some considerable time; the male died first, however, and the female only survived him for one day—having died from grief.

Genus **PORZANA** Vieill.

Porzana Vieillot, Anal. nouv. Orn. p. 61, 1816. Type *P. porzana* (Linn.).

This genus also belongs to the Crakes, and has a short bill and long and slender toes which exceed the tarsus in length. The first primary-quill is about equal to the ninth.

Key to the Species.

- A. Larger, wing more than 100 mm.
 - a'. Upper surface streaked with white; throat black; breast barred with white *P. carolina*, p. 71.
 - b'. No white streaks on the upper surface; throat white; breast uniform grey *P. albicollis*, p. 72.
- B. Smaller, wing much less than 100 mm.; breast creamy buff *P. flaviventris*, p. 73.

39. **Porzana carolina.**

CAROLINA CRAKE.

Porzana carolina (Linn.), Syst. Nat. i. p. 153, 1758 ("America septentrionali"); Sharpe, Cat. B. Brit. Mus. xxiii. p. 97, 1894; Brabourne & Chubb, B. S. Amer. i. p. 24, no. 238, 1912.

Adult male. General colour above bronze-brown blotched with black and streaked with white; quills brown, outer edge of first primary white; head, sides of neck, and ear-coverts bronze-brown with a black median line on the crown of the head; forehead, lores, and chin black; a line over the eye, sides of face, fore-neck, and breast grey, barred with white on the last; axillaries, under wing-coverts, and sides of body dark brown barred with white; middle of abdomen and long under tail-coverts white, the short under tail-coverts buff. "Bill yellow at base, dusky towards the end; feet yellowish green; claws light brown; iris bright chestnut."

Total length 178 mm., culmen 20, wing 108, tail 47, tarsus 33, middle toe and claw 45.

Adult female. Similar to the adult male. Wing 102 mm.

Young birds differ in being paler brown above and in the absence of the black throat and grey breast, which are pervaded with sandy buff like the greater part of the under surface.

The male bird described above was taken at Bartica in 1911.

Breeding-season. Unrecorded in British Guiana.

Nest. Unknown in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Bartica (*McConnell collection*).

Extralimital range. Peru, Ecuador, Colombia, Trinidad, West India Islands, Central and North America.

Habits. Unrecorded in British Guiana.

40. *Porzana albicollis*.

WHITE-NECKED CRAKE.

Porzana albicollis (Vieill.), N. Dict. d'Hist. Nat. xxviii. p. 561, 1819 (Paraguay); Salvin, Ibis, 1886, p. 176 (Roraima, 3000 ft.); Sharpe, Cat. B. Brit. Mus. xxiii. p. 102, 1894 (Georgetown, Roraima); Brabourne & Chubb, B. S. Amer. i. p. 24, no. 239, 1912.
Crex mustelina Licht., Cab. in Schomb. Reis. Guian. iii. p. 760, 1848.

Adult male. Entire upper surface including the head, back, wings, and tail black, the feathers everywhere edged with olive-brown, narrowly on the head and more broadly on the back and wings; bastard-wing, primary-coverts, and quills uniform brown; throat white; breast and abdomen bluish grey; lower flanks, vent, and under tail-coverts blackish barred and edged with white; under wing-coverts and axillaries pale brown edged with white. "Bill green; eye reddish hazel; legs, toes, and claws purplish brown" (*H. Whitely*).

Total length 190 mm., culmen 27, wing 105, tail 43, tarsus 36, middle toe and claw 43.

Adult female. Similar to the adult male. Wing 99 mm.

The male bird described was collected on the Ituribisi River in October 1908.

Breeding-season. Unrecorded in British Guiana.

Nest. Its nesting-place is in the grass (*Schomburgk*).

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Bartica, Bonasika River, Abary River, Essequibo River (*McConnell collection*); Mount Roraima, Annai (*Whitely*); Georgetown (*British Museum*).

Extralimital Range. Trinidad, Venezuela, Brazil, Paraguay.

Habits. According to Schomburgk (Reis. Guian. iii. p. 760) this bird is fairly common in plantations and grazing lands near

the coast, where he says these shy birds make well-formed runs in the tall grass. In the morning and evening it is seen on the roads and foot-paths which lead across the meadows. At the slightest noise it immediately takes refuge in the grass, which is also its nesting-place.

41. *Porzana flaviventris*.

YELLOW-BELLIED CRAKE.

Porzana flaviventris (Bodd.), Tabl. Pl. Enl. p. 52, 1783 (Cayenne); Sharpe, Cat. B. Brit. Mus. xxiii. p. 110, 1894; Brabourne & Chubb, B. S. Amer. i. p. 24, no. 241, 1912.

Adult. Head blackish, as is also a line in front and behind the eye, becoming dusky on the nape and hind-neck, somewhat darker on the mantle, back, and scapulars, where the feathers are longitudinally streaked with white; wing-coverts and tertials paler and edged with white at the tips; tail like the back; bastard-wing, primary-coverts, and quills dusky brown, becoming paler on the secondaries; sides of body, axillaries, and under tail-coverts barred with black and white; a white loreal streak which extends over the eye; throat and breast creamy buff; abdomen white. "Bill olive; legs and feet yellowish."

Total length 125 mm., culmen 16, wing 65, tail 31, tarsus 22, middle toe and claw 31.

The male and female appear to be similar both in colour and measurements.

The description is taken from an example obtained on the Abary River in July 1906.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs Undescribed from British Guiana.

Range in British Guiana. Abary River, Perth, Essequibo River (McConnell collection).

Extralimital Range. Cayenne, Jamaica, and Cuba.

Habits. Unrecorded in British Guiana.

Genus **ORTYGOPS** Hein. & Reichen.

Ortygops Heine & Reichenow, Nomencl. Mus. Hein. Orn. p. 320, 1890.

Type *O. noveboracensis* (Gmel.).

The members which compose this genus are very small birds with short bills, long and slender toes. The secondary quills are white, and the nostrils are pervious.

42. *Ortygops notata duncani*.

DUNCAN'S CRAKE.

(Plate III. fig. 2.)

Adult. Blackish above and below with a tinge of olive-brown on the upper surface, the feathers everywhere spotted, streaked, or barred with white; tip of tail pale brown on the lower aspect.

Total length 120 mm., culmen 14, wings not fully moulted, tail 31, tarsus 21, middle toe and claw 25.

This example, which is the type of the species, was obtained on the Abary River in September 1907, and is in the McConnell collection.

This subspecies is closely allied to *O. notata notata* of Gould, from which it differs in its slightly smaller size and darker appearance.

Breeding-season. Unknown.

Nest. Unrecorded.

Eggs. Undescribed.

Range restricted to British Guiana. Abary River (McConnell collection).

Habits. Unrecorded.

This bird is named in honour of the second surviving son of the late Mr. F. V. McConnell.

Genus *CRECISCUS* Cab.

Creciscus Cabanis, J. f. O. 1856, p. 428. Type *C. jamaicensis* (Gmel.).

The species of this genus are of small size with short bills, thin legs, long and slender toes. The wings are rounded and the nostrils are pervious.

Key to the Species.

- | | |
|--|----------------------------|
| A. Crown of head and entire underparts chestnut | <i>C. viridis</i> , p. 74. |
| B. No chestnut on the head; underparts not chestnut. | |
| <i>a</i> . Nape and hind-neck bronze-brown like the back; sides of face and sides of breast chestnut | <i>C. melanophæus mac-</i> |
| <i>b</i> . Nape and hind-neck chestnut in contrast to the back; sides of face and sides of breast grey | <i>[connelli]</i> , p. 75. |
| | <i>C. exilis</i> , p. 76. |

43. *Creciscus viridis*.

CAYENNE CRAKE.

Creciscus viridis (P. L. S. Müll.), Syst. Nat. Suppl. p. 120, 1776 ("Cajenne"); Brabourne & Chubb, B. S. Amer. i. p. 25, no. 251, 1912.



1. *Crecisus melanophæus marconelli*.
Mc Connell's Crake.

2. *Ortygops notata duncani*.
Duncan's Crake.

Porzana cayennensis Salvin, Ibis, 1886, p. 176 (Merumé Mts., Roraima); Quelch, Tinehri (2) v. p. 107, 1891.

Cresciscus cayanensis Sharpe, Cat. B. Brit. Mus. xxiii. p. 143, 1894 (Merumé Mts., Roraima).

Adult female. Hind-neck, back, wings, and tail bronze-brown; forehead and crown of head chestnut; sides of face and a line above the eye dark grey; under surface chestnut, paler on the thighs, abdomen, throat, and under wing-coverts. "Eye orange-yellow; legs and toes reddish pink, claws brown" (*H. Whitely*).

Total length 162 mm., culmen 29, wing 91, tail 30, tarsus 35, middle toe and claw 36.

Adult male. Similar to the adult female. Wing 94 mm.

The bird described was collected on the Kamakabra River.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Kamakabra River, Bonasika River, Makauria River, Abary River, Anarica River, Lower Mazaruni River (*McConnell collection*); Georgetown (*Quelch*); Merumé Mountains, Mount Roraima (*Whitely*).

Extralimital Range. Brazil and Colombia.

Habits. Unrecorded in British Guiana.

44. *Cresciscus melanophæus macconnelli*.

McCONNELL'S CRAKE.

(Plate III. fig. 1.)

Adult. Nape, hind-neck, back, and wings dark bronze-brown, being darker on the quills and blackish on the innermost secondaries, rump, and tail; fore part of head and space round the eye hoary grey; ear-coverts and sides of breast deep chestnut; throat and middle of breast white, the latter washed with rufous; axillaries, under wing-coverts, flanks, and vent black barred with white, paler on the fore part of the thighs, hinder aspect of thighs dull black; under tail-coverts deep chestnut.

Total length 145 mm., culmen 19, wing 80, tail 39, tarsus 33, middle toe and claw 41.

The bird described is from Bonasika River. Type in the McConnell collection.

The subspecies described above is allied to *C. melanopharus melanopharus* (Vicill.), but differs in having the fore part of the head

and space round the eye grey, the lower back and rump blackish, and the much deeper coloured chestnut on the sides of the breast.

Breeding-season. Unknown.

Nest. Unrecorded.

Eggs. Undescribed.

Range confined to British Guiana. Bartica, Bonasika River (McConnell collection).

Habits. Unrecorded.

45. *Creciscus exilis*.

TEMMINCK'S CRAKE.

Creciscus exilis (Temm.), Pl. Col. v. pl. 523, 1831 (Peru); Sharpe, Cat. B. Brit. Mus. xxiii. p. 138, 1894; Brabourne & Chubb, B. S. Amer. i. p. 24, no. 245, 1912.

Adult male. Back brown, wings also brown, some of the feathers barred and tipped with white, upper tail-coverts also barred and tipped with white; tail blackish brown; a chestnut band on the hind-neck; crown of head dark slate-colour; sides of face and breast slate-grey; throat and middle of abdomen white; axillaries, sides of the body and under tail-coverts black barred with white, tinged with buff on the lower flanks; under wing-coverts whitish.

Total length 130 mm., culmen 16, wing 75, tail 33, tarsus 23, middle toe and claw 33.

Adult female. Similar to the adult male. Wing 71 mm.

The male bird described was collected on the Bonasika River.

Young. General colour black, with brown on the wings, throat and middle of breast whitish, and the under wing-coverts for the most part white. This example was obtained on the Abary River in September 1907.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Bonasika River, Abary River (McConnell collection).

Extralimital Range. Trinidad, North Brazil.

Habits. Unrecorded in British Guiana.

Genus **GALLINULA** Brisson.

Gallinula Brisson, Orn. vi. p. 3, 1760. Type *G. chloropus* (Linn.).

The chief characters which distinguish this genus are the lateral lobes on the sides of the toes and the frontal shield at the base of the forehead; general colour sooty-black.

46. *Gallinula galeata*.

AMERICAN WATERHEN.

Gallinula galeata (Licht.), Verz. Doubl. p. 80, 1823 (San Paulo); Cab. in Schomb. Reis. Guian. iii. p. 760, 1848; Brabourne & Chubb, B. S. Amer. i. p. 25, no. 255, 1912.

Adult female. Head and neck all round dull black; mantle, upper back, wings, and scapulars dark slate-colour; middle of back and rump bronze-brown; tail black; quills dark brown, outer edge of first primary and a spot at the tip of two of the secondaries white; breast, sides of body, and abdomen deep slate-grey, dull white on the middle of the abdomen, some of the flank-feathers broadly streaked with white; central under tail-coverts black, the outer ones pure white; marginal under wing-coverts and edge of wing white, inner coverts grey tipped with white. "Bill and frontal shield bright scarlet in life, end of the former greenish yellow or bright yellow; legs and feet yellowish green, joints ashy blue; upper part of the naked tibia scarlet; iris brown."

Total length 330 mm., bill from gape 31, wing 162, tail 65, tarsus 47, middle toe and claw 76.

Adult male. Similar to the adult female. Wing 176 mm.

The description of the female is taken from a specimen collected on the Abary River.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Bartica, Abary River (*McConnell collection*).

Extralimital Range. The greater portion of North and South America.

Habits. Schomburgk says (Reis. Guian. iii. p. 760) that this species was found in company with *Ionornis martinica* near the bogs and in the Avicennien bush near the coast.

Genus **IONORNIS** Reichenb.

Ionornis Reichenbach, Nat. Syst. Vögel, p. xxi, 1852. Type *I. martinica* (Linn.).

This genus differs from *Gallinula* in being more slender in form and in having no posterior caruncle on the frontal shield; general colour bluish green.

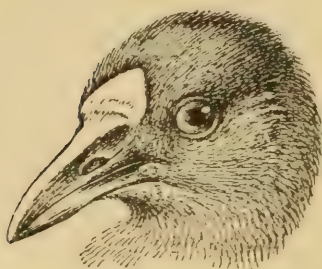


Fig. 14.—To show the frontal shield.

Key to the Species.

- | | |
|--|---------------------------------|
| A. Larger, wing more than 150 mm.; under surface purplish blue..... | <i>I. martinica</i> , p. 78. |
| B. Smaller, wing less than 150 mm.; under surface white with a slight wash of pale blue on the fore-neck | <i>I. flavirostris</i> , p. 79. |

47. *Ionornis martinica*.

PURPLE GALLINULE.

Ionornis martinica (Linn.), Syst. Nat. i. p. 259, 1766 ("Martinicæ inundatis"); Beebe, Our Search for a Wilderness, p. 378, 1910 (Abary River); Brabourne & Chubb, B. S. Amer. i. p. 26, no. 259, 1912.

Porphyrio martinicus Cab. in Schomb. Reis. Guian. iii. p. 761, 1848; Salvin, Ibis, 1886, p. 177; Quelch, Timehri (2) v. p. 107, 1891 (Georgetown).

Porphyriola martinica Sharpe, Cat. B. Brit. Mus. xxiii. p. 189, 1894 (Demerara).

Blue Moorhen (*Quelch*).

Adult female. Back, wings, and tail bluish green, brighter and more blue on the upper wing-coverts; quills brown on the inner webs; head, neck, and under surface purplish blue; under wing-coverts and axillaries like the mantle; lower abdomen and thighs dull black; under tail-coverts white. "Bill red, green at the point; toes yellow; frontal shield sky-blue."

Total length 285 mm., bill from gape 31, wing 170, tail 69, tarsus 57, middle toe and claw 74.

Adult male. Similar to the adult female.

The female described was collected on the Abary River in June 1891.

Young birds are distinguished from the adults in being much less bright above and having the under surface and sides of face buff colour.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Bartica, Abary River (*McConnell collection*) ; Georgetown (*Quelch*).

Extralimital Range. Colombia, Brazil, Paraguay, West Indies, Central America north to Texas and Florida.

Habits. Schomburgk mentions this bird (*Reis. Guian.* iii. p. 761) as one of the commonest in British Guiana. It is found in flocks, especially along the edges of the bogs near the coast. The "Macusis" call it *Anututtu*.

48. *Ionornis flavirostris*.

LITTLE GALLINULE.

Ionornis flavirostris (Gmel.), *Syst. Nat.* i. p. 699, 1789 (Cayenne);
Brabourne & Chubb, *B. S. Amer.* i. p. 26, no. 259, 1912.

Porphyriola parva (Bodd.) [nec Forst. 1781], Sharpe, *Cat. B. Brit. Mus.* xxiii. p. 191, 1894 (Aunai).

Adult male Head, hind-neck, upper back and scapulars brown with greenish edges to the feathers; lower back, rump, upper tail-coverts, and tail blackish brown with white tips to the upper tail-coverts and tail; upper wing-coverts and outer webs of quills pale greenish blue like the sides of the face and sides of breast; under surface white, including the axillaries and under wing-coverts, with a wash of pale blue on the fore-neck and breast. "Bill and shield light green; legs and toes yellow-ochre; claws orange-brown; iris reddish brown" (*H. Whitely*).

Total length 230 mm., bill from gape 23, wing 138, tail 72, tarsus 42, middle toe and claw 58.

Adult female. Similar to the adult male.

Immature birds are distinguished by the buff on the sides of the face, fore-neck, and breast.

The male described is from Hoobaboo.

Young. Head, hind-neck, mantle, and scapulars rusty olive-brown; lower back, rump, and upper tail-coverts sooty-black with ferruginous edgings to the feathers; tail bronzy brown, rather broadly tipped with white; wings dull greenish blue; throat and entire under surface white with a wash of sandy buff, more intensely on the fore-neck, sides of neck, sides of face, and ear-coverts.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Abary River, Hoobaboo (*McConnell collection*).

Extralimital Range. Brazil.

Habits. Unrecorded in British Guiana.

Family HELIORNITHIDÆ.

The members of this family, which are peculiar by their long and stiffened tails, elongated wings with short tertials, and Rail-like bills, are distributed as follows :—In Asia (Burma) one genus and one species, in Africa one genus and three species, and in Central and South America one genus and one species.

Genus HELIORNIS Bonn.

Heliornis Bonnaterre, Tabl. Méth. i. Intro. p. 64, 1790. Type *H. fulica* (Bodd.).

This genus has no very near ally in South America, but in the classification it is placed immediately after the Coots (Ralliformes) and before the Grebes (Podicipiformes) on account of the toes being lobed laterally. It is easily distinguished from either of these orders, however, by its peculiar bill and the long rounded tail.

49. *Heliornis fulica*.

COOT-LIKE HELIORNIS.

Heliornis fulica (Bodd.). Tabl. Pl. Enl. p. 54, 1783 (Cayenne); Salvin, Ibis, 1886, p. 177 (Merumé Mts., River Yuruani); Quelch, Timehri (2) ii. p. 373, 1888 (Abary River); Sharpe, Cat. B. Brit. Mus. xxiii. p. 233, 1894; Brabourne & Chubb, B. S. Amer. i. p. 27, no. 267, 1912.

Podoa surinamensis Cab. in Schomb. Reis. Guiana, p. 765, 1848.

Heliornis surinamensis Brown, Canoe and Camp Life, p. 47, 1876 (Cartoonie).

“Little Ducklar” or “Frog-footed Duck,” “Vicissi Duck” (*Quelch*).

Adult male. Entire back, wings, lower flanks, and under tail-coverts bronze-brown; crown of head, hind-neck, and a line on the side of the neck black; a bright rufous patch on the sides of the face; throat white, as also a space in front of the eye, a line behind the eye, and another on the side of the neck; breast and abdomen also white with a wash of buff more intensely on the

upper breast. "Bill bright red with a slight black mark on the culmen and behind the nostrils, under mandible whitish with a whitish-yellowish streak near the base; toes clear yellow, the middle one with three black cross-bands, the inner one with two, and the outer one with four; iris greyish brown."



Fig. 15.—Head and foot of *Heliornis*.

Total length 270 mm., culmen 30, wing 141, tail 84, tarsus 22.

The female differs from the male only by the absence of the rufous patch on the sides of the face.

The male described was collected on the Supenaam River.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Supenaam River, Abary River, Curubung, Grote Creek (*McConnell collection*); Merumé Mountains, Yuruani River (*Whitely*); Cartoonie River (*Brown*).

Extralimital Range. Surinam (*Penard*), Venezuela, Colombia, Ecuador, Peru, Southern Brazil.

Habits. Schomburgk states (*Reis. Guian. iii. p. 765*) that this species is found commonly in pairs on stagnant creeks and rivers shaded with overhanging vegetation. When pursued they rarely dive, but fly along the surface of the water or hide in the bush. The "Macusis" call it *Yawiwa* and the "Warraus" *Oranik*. The only time he saw it dive was when wounded. Its voice is peculiar. It has been said by others that when danger threatens the young the parent takes them under its wings until it reaches a place of safety.

Mr. J. J. Quelch (*Timehri* (2) ii. p. 373) observed this species on the Abary River, and remarks:—"A Little Ducklar or Frog-footed Duck (*Heliornis fulica*), dark brown above and grey below, with streaks of white on the head and neck, with a sharp and narrow bill, and with a web divided up around the toes, was often seen skimming along the surface of the water, which its wings and feet often just slightly splashed, but more frequently they were but just seen before they disappeared below the water."

Order **PODICIPIDIFORMES.**

Family **PODICIPIDÆ.**

The Grebes are easily distinguished from all other birds by their compressed tarsi, broadly lobed toes, and their obsolete tails. They are distributed on all the large continents of the world. Nine species are known in South America, one being represented in British Guiana.

Genus **TACHYBAPTUS** Reichenb.

Tachybaptus Reichenbach, *Syst. Nat. Vög.* p. iii, 1850. Type *T. ruficollis* (Vroeg).

The South American birds of this genus are of small size, with thin and almost straight bills.

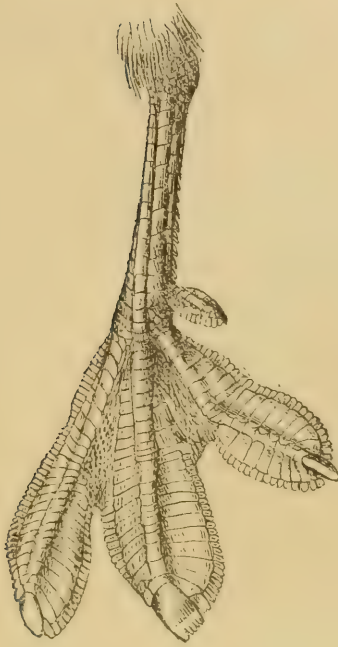


Fig. 16.—To illustrate the foot of a Grebe.

50. *Tachybaptus brachyrhynchus*.

SHORT-BILLED GREBE.

Podiceps brachyrhynchus Chapm. Bull. Amer. Mus. xii. p. 255, 1899 (Matto Grosso); Brabourne & Chubb, B. S. Amer. i. p. 27, no. 268, 1912.

Colymbus dominicus Cab. in Schomb. Reis. Guiana, iii. p. 765, 1848.

Podiceps dominicus Salvin, Ibis, 1886, p. 181; Ogilvie-Grant, Cat. B. Brit. Mus. xxvi. p. 520, 1898 (British Guiana).

Adult. General colour above and below dark brown; paler on the hinder face and grey on the lores; a line below the eye and chin white; flight-quills for the most part white with brown on the outer webs and at the tips; the feathers of the under surface tipped with silky white; axillaries, under wing-coverts, and greater part of the quill-lining white.

Total length 165 mm., culmen 23, wing 99, tarsus 31, middle toe and claw 44.

The male and female are similar both in size and coloration.

The McConnell collection does not possess an example of this species, and the description is taken from a specimen in the

British Museum obtained by Messrs. Quelch and McConnell on the Great Savannas in 1898, and presented by them to that institution.

Breeding-season. Unknown in British Guiana.

Nest. The nest is the same as that of the other species of the family; it floats on the water among the reeds, rising and falling with the tide (*Schomburgk*).

Eggs. "Two eggs form the clutch" (*Schomburgk*).

Range in British Guiana. Great Savannas (*British Museum*).

Extralimital Range. Tropical portion of South America.

Habits. According to Schomburgk (*Reis. Guian. iii. p. 765*) this bird lives in small flocks in the Savannah swamps and on the coast, but is never found on the rivers. It is an expert diver. The nest is the same as that of the other species of the family; it floats on the water among the reeds, rising and falling with the tide. Two eggs form the clutch.

Genus **PODILYMBUS** Lesson.

Podilymbus Lesson, *Traité d'Orn.* p. 595, 1831. Type *P. podiceps* (Linn.).

This genus is founded chiefly on the short thick bill, which is curved downwards at the tip, the oval nostrils, and the bristly feathers on the forehead.

51. *Podilymbus podiceps*.

PIED-BILLED GREBE.

Podilymbus podiceps (Linn.), *Syst. Nat.* i. p. 136, 1758 ("America septentrionali"); Ogilvie-Grant, *Cat. B. Brit. Mus.* xxvi. p. 553, 1898; Brabourne & Chubb, *B. S. Amer.* i. p. 28, no. 276, 1912.

Adult male. General colour above dusky brown, including the head, wings, and back; sides of face more grey; hind-neck black; sides of neck and fore-neck pale brown; chin and throat black; breast and abdomen silky white; upper breast, sides of body, and flanks brown intermixed with white.

Total length 205 mm., culmen 24, wing 131, tarsus 42.

Adult female. Similar to the adult male. Wing 123 mm.

Young in down. Upper surface and sides of body brown, more or less mixed with white; under surface dull white; head, throat,

and neck also white with blackish-brown streaks and patches; middle of crown and a bar on the nape buff.

This bird can always be distinguished from all the other Grebes by the black band on the bill.

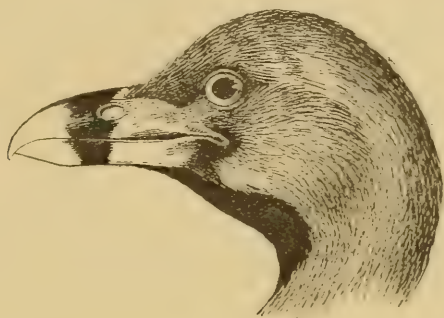


Fig. 17.—To show the peculiar shape and colour of the bill.

The specimens from which the descriptions were taken are in the British Museum.

There are no examples of this species in the McConnell collection; but Mr. McConnell told me that he had met with it in the Colony, and the Curator of the Georgetown Museum informs me that they have specimens from Vryheid's Lust and the Hobabo Creek, the former on the east coast of Demerara and the latter about eight miles inland, an affluent of the Demerara River (*in litt.*).

Order PROCELLARIIFORMES.

Family THALASSIDROMIDÆ.

The Petrels are essentially sea-birds and are all web-footed. They can always be distinguished from the other orders of birds by their peculiar bills and tubular nostrils.

Genus CYMOCHOREA Coues.

Cymochorea Coues, Proc. Acad. Nat. Sci. Philad. 1864, p. 75. Type *C. leucorhoa* (Vieill.).

The members of this genus are very small birds with tubular nostrils, as shown in the figure, and have forked tails, short legs, and small webbed feet.



Fig. 18.—To illustrate the peculiar bill.

52. *Cymochorea leucorhoa*.

FORK-TAILED PETREL.

Cymochorea leucorhoa (Vieill.), N. Diet. d'Hist. Nat. xxv. p. 422, 1817 ("a trouvé sur les bords maritimes de la Picardie").

Oceanodroma leucorhoa Salvin. Cat. B. Brit. Mus. xxv. p. 348, 1896; Chubb, Bull. Brit. Orn. Club, xxxi. p. 39, January 1913 (Essequebo River).

Adult. Sooty-brown above and below, with a greyish tinge on the head; a grey band across the wing; upper tail-coverts white; under tail-coverts inclining to white at the base. Bill and feet black.

Total length 203 mm., culmen 15, wing 169, tail 65, lateral feathers 87, tarsus 25, middle toe and claw 24.

The bird from which the description is taken was obtained on the Warima River, Essequebo.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Egg. Undescribed from British Guiana.

Range in British Guiana. Warima River, Essequebo River (McConnell collection).

Extralimital Range. Seas of the Northern Hemisphere.

Habits. Unrecorded in British Guiana.

This is the first and only record of this species in British Guiana, but it has been recorded from Surinam (*cfr.* Penard, *Vogels Guyana*, i. p. 58).

Order LARIFORMES.

Family LARIDÆ,

We include in this family the Terns, Gulls, and Skuas. The Terns are generally distinguished by their pointed bills and forked tails, the Gulls by their stouter bills and square tails, and the Skuas by their hooked bills and pointed tails.

Genus **PHAËTHUSA** Wagler.

Phaëtusa Wagler, Isis, 1832, p. 1224. Type *P. chloropoda* (Vieill.).

This monotypic genus of Terns is characterized by its large bill, which is twice the length of the tarsus, and the rounded or slightly pointed tail-feathers, the tail being less than half the length of the wing.

53. *Phaëtusa chloropoda*.

GREAT-BILLED TERN.

Phaëtusa chloropoda (Vieill.), N. Dict. d'Hist. Nat. xxxii. p. 171, 1819 (Paraguay); Brabourne & Chubb, B. S. Amer. i. p. 33, no. 319, 1912.

Sterna magnirostris Licht., Cab. in Schomb. Reis. Guian. iii. p. 761 (1848); Salvin, Ibis, 1886, p. 180; Quelch, Timehri (2) v. p. 106, 1891 (Georgetown).

Phaëtusa magnirostris Saunders, Cat. B. Brit. Mus. xxv. p. 23, 1896 (River Rupuruni, Ourumee); Beebe, Our Search for a Wilderness, p. 154, Waini, p. 378, Abary, 1910.

Adult male. Crown of head black; entire back, scapulars, and inner lesser upper wing-coverts grey, as also the tail; a narrow line at the base of the forehead, fore part of face, and entire under surface, including the axillaries and under wing-coverts, white with a shade of grey on the sides of the body; the small coverts round the bend of the wing, median, and greater upper wing-coverts also white, some of the greater series tinged with grey; bastard-wing feathers grey on the outer web, blackish on the inner one; primary-coverts and quills black with some white on the inner webs of the latter; secondaries grey, inner webs white; tertials for the most part grey with whitish tips. "Bill chrome-yellow, slightly greenish at the base of the lower mandible; feet olive, webs yellow."

Total length 363 mm., exposed portion of culmen 62, wing 300, tail 113, tarsus 24.

The bird described was collected on the Abary River.

Adult female. Similar to the adult male. Wing 305 mm.

Young birds differ from the adults in having the head grey and the tail-feathers fringed with white at the tips.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Supenaam River,

Bartica, Abary River (*McConnell collection*); Rupununi River, Ourunai (*Whitely*); Waini River (*Beche*); Georgetown (*Quelch*).

Extralimital Range. Venezuela, Brazil, Ecuador, Peru, Bolivia, Paraguay, Argentina.

Habits. Schomburgk says (*Reis. Guian.* iii. p. 761) that this species is not only found on the coast but occurs up the inland rivers and along the tributaries to the sand dunes. It lays two, or at the most, three eggs in a hollow in the sand-banks. It occurs also on the Rupununi River.

Mr. Beche, who observed this bird on the Abary Savannas (*Our Search for a Wilderness*, p. 378), writes:—"Terns were one of the most picturesque features of the savanna, flying over and around the island in small flocks, the large Great-billed fellows with black caps and wings, beat back and forth, or hung fluttering over the lagoon, and now and then dropped plummet-like after a small fish."

Genus **GELOCHELIDON** Brehm.

Gelochelidon Brehm. *Vög. Deutschl.* p. 774. 1831. Type *G. nilotica* (Gmel.).

The bird on which this monotypic genus was founded is somewhat more stoutly built than Terns generally, with the outer tail-feathers pointed and longest, the bill short and stout, the legs long, and the tarsus longer than the bill.

54. *Gelochelidon nilotica gronvoldi*.

GULL-BILLED TERN.

Gelochelidon nilotica gronvoldi Mathews. *Birds Austr.* ii. p. 331, 1912 (Argentina).

Gelochelidon nilotica Brabourne & Chubb. *B. S. Amer.* i. p. 33, no. 320, 1912.

Gelochelidon anglica (Mont.), Saunders. *Cat. B. Brit. Mus.* xxv. p. 25, 1896 (Demerara).

Adult male. Head for the most part black intermixed with white, blacker on the nape and whiter on the forehead; back and wings silvery grey, the primaries darker towards the tips and more or less white on the inner webs on the basal portion; outer pair of tail-feathers inclining to white. Bill black, occasionally reddish at the base of the lower mandible; iris hazel-brown; tarsi and toes black with a reddish tinge; webs moderately indented."

Total length 325 mm., culmen 46, wing 305, tail 117, tarsus 32, middle toe and claw 29.

Adult female. Similar to the adult male. Wing 295 mm.

The description of the male is taken from an example obtained on the Abary River, September 1906.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Abary River (*McConnell collection*).

Extralimital Range. Brazil and Argentina (in South America).

Habits. Unrecorded in British Guiana.

Genus **STERNA** Linn.

Sterna Linné, Syst. Nat. 10th ed. i. p. 137, 1878. Type *S. hirundo* Linn.

In this genus—the typical Terns—the birds are comparatively small, with short legs, short and slender bill, wings long, tail deeply forked, tarsus short and never exceeding the middle toe and claw in length.

Key to the Species.

- | | |
|--|----------------------------------|
| A. Larger, wing more than 200 mm.; tail more than 100 | <i>S. hirundo</i> , p. 90. |
| B. Smaller, wing less than 200 mm.; tail less than 100. | |
| <i>a'</i> . Smaller, wing less than 170 mm.; bill yellow tipped with black; entire primary-quills blackish | <i>S. melanorhyncha</i> , p. 91. |
| <i>b'</i> . Larger, wing more than 170 mm.; bill green tipped with yellow; only the three outer primary-quills black | <i>S. superciliaris</i> , p. 92. |

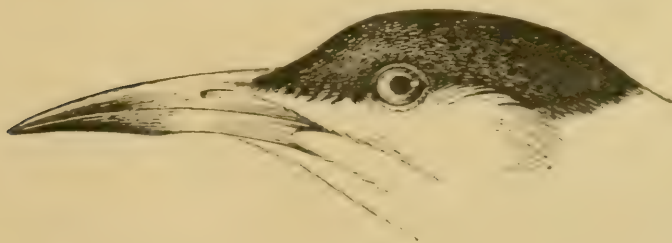


Fig. 19 —To illustrate the pointed bill and the long gonys.



Fig. 20. -To show the form of the tail.

55. *Sterna hirundo*.

COMMON TERN.

Sterna hirundo Linn. Syst. Nat. 10th ed. i. p. 137, 1758 (Sweden).

Sterna fluviatilis Naum. Isis, 1819, p. 1847 (Ziebigk-Cöthen, Germany);

Saunders, Cat. B. Brit. Mus. xxv. p. 54, 1896; Brabourne & Chubb,
B. S. Amer. i. p. 33, no. 323, 1912.

Immature. General colour above pale ash-grey, darker on the outer web of the first primary and at the tips of the primary-quills, outer webs of outer pair of tail-feathers also darker than the back, and a few dark feathers on the lesser upper wing-coverts; hinder crown and nape black; forehead, upper tail-coverts, inner webs of tail-feathers, primary and secondary quills white like the chin, throat, under wing-coverts, axillaries, and under tail-coverts; breast, abdomen, and sides of the body tinged with grey. Bill and feet coral-red; iris dark brown.

Total length about 290 mm., culmen 42, wing 272, tail (outer feathers) 145, middle feathers 86, tarsus 21, middle toe and claw 21.

The specimen described above was obtained on the Lower Mazaruni River in 1898:

Adult male (summer plumage). Crown of head and nape black; back and wings pale ash-grey; primary-quills hoary grey; outer web of the first quill dark brown, as also the tips of the primaries, inner webs broadly edged with white; upper tail-coverts and middle tail-feathers white, the lateral feathers grey on the outer edges; lores, sides of face, throat, under tail-coverts, and under wing-coverts white; remainder of the under surface very pale grey.

Total length 330 mm., culmen 37, wing 270, tail 111, lateral feathers 182, tarsus 19.

Adult female (summer plumage). Similar to the adult male. Wing 280.

The descriptions of the male and female were taken from specimens in the British Museum.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Lower Mazaruni River (*McConnell collection*).

Extralimital Range. Aruba and Bonaire Islands and Bahia (in South America), North America, Europe, Africa, India, and Ceylon.

Habits. Unrecorded in British Guiana.

56. *Sterna melanorhyncha*.

BLACK-BILLED LITTLE TERN.

Sterna melanorhyncha (Less.), Descr. Mamm. et Ois. p. 252, 1847 (Guadeloupe); Brabourne & Chubb, B. S. Amer. i. p. 33, no. 329, 1912.

Sterna antillarum Saunders, Cat. B. Brit. Mus. xxv. p. 122, 1896.

Immature. General colour of the upper surface pale ash-grey; lesser marginal upper wing-coverts dark brown; primary-coverts and primary-quills blackish with broad white edges to the inner webs of the latter; head grey with dark median lines to the feathers, nape darker and inclining to black; forehead, throat, and entire under surface pearly white. Basal portion of bill yellow, tip black; tarsi and toes orange-yellow.

Total length 200 mm., culmen 31, wing 165, tail 53, tarsus 15, middle toe and claw 18.

The bird described above was obtained on the Abary River.

Adult male. Back, wings, and tail pale grey; the two outer primaries blackish edged with white on the inner webs; lores, crown of head, and nape black; forehead and entire under surface white. "Bill yellow, tip black; tarsi and toes orange-yellow."

Total length 235 mm., culmen 31, wing 171, lateral tail-feathers 104, tarsus 14.

Adult female. Similar to the adult male. Wing 167.

The descriptions of the adult male and female were taken from specimens in the British Museum collected at Brownsville, Texas—Salvin-Godman collection.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Abary River (*McConnell collection*).

Extralimital Range. Venezuela, Margarita, Aruba and Bonaire Islands (in South America), North America, West India Islands, and casually in Africa.

Habits. Unrecorded in British Guiana.

57. *Sterna superciliaris*.

LEAST TERN.

Sterna superciliaris Vieill. N. Dict. d'Hist. Nat. xxii. p. 126, 1819 (Paraguay); Quelch, Timehri (2) v. p. 106, 1891 (Georgetown); Saunders, Cat. B. Brit. Mus. xxv. p. 124, 1896 (Rupununi River); Brabourne & Chubb, B. S. Amer. i. p. 34, no. 330, 1912.

Adult male. Head, hind-neck, and loreal streak black; back, wings, and tail pale ash-grey; primary-coverts and three outer primaries blackish, inner webs of the latter white on the basal portion; base of forehead and entire under surface pearly white. Bill green at base, yellow at tip; tarsi and toes olive-yellow.

Total length 228 mm., culmen 36, wing 188, tail 83, tarsus 16, middle toe and claw 19.

The description is taken from an example obtained on the Abary River in September 1907.

Adult female. Similar to the adult male. Wing 185.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Bartica, Abary River (*McConnell collection*); Rupununi River (*Whitely*); Georgetown (*Quelch*).

Extralimital Range. Surinam, Venezuela, and Colombia to Paraguay and Argentina.

Habits. Unrecorded in British Guiana.

Genus RHYNCHOPS Linn.

Rhynchops Linné, Syst. Nat. 10th ed. i. p. 138, 1758. Type *R. nigra* Linn.

The chief character of this genus of Terns is the peculiar bill, which is much compressed and very thin, the lower mandible being longer than the upper one.



Fig. 21.—To show the peculiar formation of the bill.

58. *Rhynchops cinerascens*.

BLACK-TAILED SKIMMER.

Rhynchops cinerascens Spix, Av. Bras. ii. p. 80. pl. cii. 1825 ("in locis ripariis flum. Amazonum"); Brabourne & Chubb, B. S. Amer. i. p. 34, no. 338, 1912.

Rhynchops nigra cinerascens Beebe, Our Search for a Wilderness, pp. 135, 148, 1910 (Hoorie Creek).

Rhynchops melanurus Swains., Cab. in Schomb. Reis. Guian. iii. p. 761 (1848); Brown, Canoe and Camp Life, pp. 95, 346, 1876 (Mt. Arrisaro, Upper Corentyne River).

Rhynchops melanura Saunders, Cat. B. Brit. Mus. xxv. p. 156, 1896 (River Rupuruni, Ourumee).

Rhynchops nigra Queleh, Timehri (2) v. p. 106, 1891 (Georgetown).

"The Large Scissor-bill Gull" (*Queleh*); "Sea-dogs" (*Brown*).

Immature. General colour above blackish brown, with paler edges to some of the feathers; forehead and under surface of body white. Iris dark brown; feet orange-red.

Total length 445 mm., culmen 85, gonys 113, wing 380, tail 99, tarsus 35, middle toe and claw 34.

The bird described was taken on the Abary River in July 1906.

Adult male. Head, back, and wings black; tail dark brown with pale edges to the feathers; forehead, cheeks, throat, breast, abdomen, and under tail-coverts white; axillaries and under wing-coverts pale brown.

Total length 515 mm., culmen 86, gonys 114, wing 428, tail 130, tarsus 36.

Adult female. Similar to the adult male, but smaller in size. Wing 382.

The descriptions of the adult male and female are taken from specimens in the British Museum collected by H. Whitely in British Guiana.

Breeding-season. Unknown in British Guiana.

Nest. "On the sandy banks of the rivers" (*Schomburgk*).

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Ituribisi River, Abary River (*McConnell collection*); Georgetown (*Quelch*); Hoorie Creek (*Beebe*); Mount Arrisaro, Upper Corentyne River (*Brown*); Upper Essequibo River, Rupununi River (*Schomburgk*).

Extralimital Range. Trinidad, Venezuela, Colombia, Peru, Chile.

Habits. Schomburgk states (*Reis. Guian.* iii. p. 761) that he met with this bird in large flocks near the coast, especially at the mouths of the oceanic rivers. They also travel up the rivers, the sandy banks of which are their breeding-places. He found them, also in large flocks, on the Upper Essequibo and even on the Rupununi, about 800 miles inland. The "Macusis" call it *Darra Darra* and the "Warraus" *Manarih*.

Mr. Barrington Brown (*Canoe and Camp Life*, p. 95) writes:—"The Scissor-bill Gulls' or 'Sea-dogs' also are frequently seen flying swiftly along in small parties, with their sharp, flat beaks dipping in the water. Their cry resembles somewhat the bark of a dog, hence they have received the name of 'Sea-dogs.' On the Upper Corentyne we saw a few of the Scissor-bill and small Gray Gulls."

Mr. Beebe (*Our Search for a Wilderness*, pp. 135, 148) gives the following note:—"Black-tailed Skimmers ploughed the surface of the tide in endless furrows, and a large Skimmer flew past the boat, and later we saw several flocks. In the calm of the evening the 'yap! yap!' of a passing but invisible Skimmer came faintly."

Mr. J. J. Quelch (*Timehri* (2) v. p. 106) observed this species at Georgetown, and remarks:—"The Large Scissor-bill Gull (*Rhynchops nigra*) will at once be known by the peculiarly flattened (in a vertical direction) and elongated bill from which its name is taken."

Genus *LARUS* Linn.

Larus Linné, *Syst. Nat.* 10th ed. i. p. 136, 1758. Type *L. canus* Linn.

The chief characters of this genus, which separate it at once from *Sterna*, are the short and stout bill, sharply curved upper mandible, and short gonys, the almost square tail, and having a portion of the tibia unfeathered.

59. *Larus atricilla*.

LAUGHING GULL.

Larus atricilla Linn. Syst. Nat. i. p. 136, 1758 (Carolina); Quelch, Timehri (2) v. p. 106, 1891 (Georgetown); Saunders, Cat. B. Brit. Mus. xxv. p. 194, 1896 (British Guiana); Beebe, Our Search for a Wilderness, p. 134, 1910 (Georgetown Harbour); Brabourne & Chubb, B. S. Amer. i. p. 35, no. 343, 1912.

Xema atricilla Cab. in Schomb. Reis. Guian. iii. p. 761, 1848 (Coast of British Guiana).

Adult male. Head and throat slate-brown, eyelids above and below

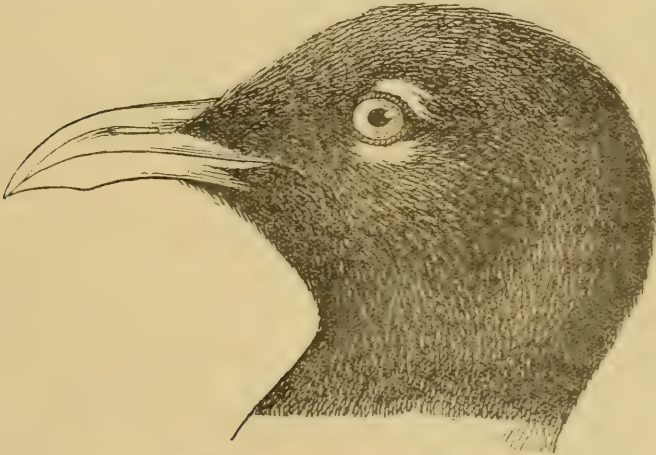


Fig. 22.—To illustrate the bill with its short gonys.

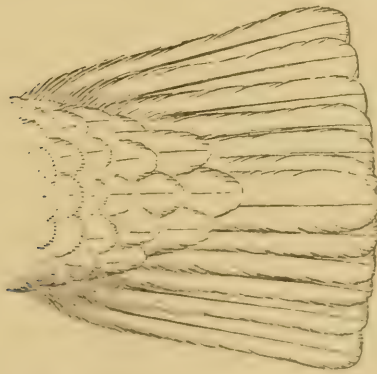


Fig. 23.—To show the shape of the tail.

white; back and wings dark ash-grey; the four outer primary-

quills blackish ; tail, hind-neck, and entire under surface white.
 " Bill lake-red, tarsi and toes dull red."

Total length 435 mm., culmen 45, wing 310, tail 122, tarsus 50.

Adult female. Similar to the adult male. Wing 299.

Immature. Differs from the adult in being brown on the upper surface, in having no white on the hind-neck nor on the tail-feathers.

The descriptions are taken from specimens obtained on the Abary River.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Abary River (*McConnell collection*) ; Georgetown Harbour (*Beebe*) ; British Guiana (*Schomburgk & Whitely*) ; Georgetown (*Quelch*).

Extralimital Range. Surinam (*Penard*), Trinidad, Venezuela and the adjacent islands, North Brazil, and Peru.

Habits. Schomburgk states that he found this bird along the coast.

Genus **STERCORARIUS** Briss.

Stercorarius Brisson, Orn. vi. p. 149, 1760. Type *S. parasiticus* Linn.

This genus is distinguished from *Larus* in having a cere, a hook at the tip of the upper mandible, strong and sharply-hooked claws, and by the middle tail-feathers projecting far beyond the outer ones.

60. *Stercorarius pomarinus*.

POMATORHINE SKUA.

Stercorarius pomarinus (Temm.), Man. d'Orn. p. 514. 1815 (Coast of Sweden) ; Brabourne & Chubb, B. S. Amer. i. p. 36, no. 353, 1912.

Stercorarius pomatorhinus Saunders, Cat. B. Brit. Mus. xxv. p. 322, 1896.

Megalestris chilensis Penard, Vog. Guyana, i. p. 18 (British Guiana).

Immature. Upper surface brown, with buff or rufous-buff edgings to the feathers ; tail uniform brown ; quills blackish, white on the inner webs at the base, shafts white at base, brown at the tips ; under surface paler brown than the back, with rufous cross-bars on the fore-neck and breast, which are less distinct on the throat and broader and whiter on the abdomen, flanks, and under tail-coverts.

Total length 417 mm., exposed portion of culmen 34, wing 343, tail 132, tarsus 55, middle toe and claw 51.

The above description is taken from an example obtained in the harbour at Georgetown.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

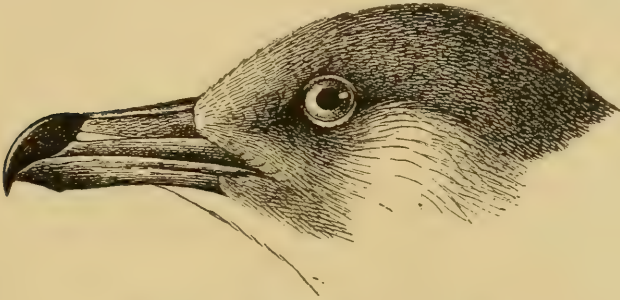


Fig. 24.—To show the hooked bill.

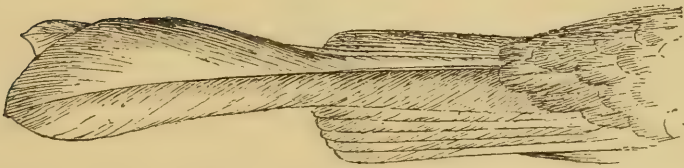


Fig. 25.—To illustrate the shape of the tail of *S. pomarinus*.

Range in British Guiana. Georgetown Harbour (*McConnell collection*).

Extralimital Range. Arctic Regions.

This appears to be the first record of the occurrence of this species in British Guiana.

Order CHARADRIIFORMES.

Family CHARADRIIDÆ.

This family includes the Plovers (*Charadriina*), which have rather short legs and partially webbed toes ; the bill is somewhat short and the dertrum much swollen except in *Arenaria*.

Genus ARENARIA Briss.

Arenaria Brisson, Orn. v. p. 132, 1760. Type *A. interpres* Linn.

This genus is characterized by the wedge-shaped bill with no swollen dertrum.



Fig. 26.—To show the wedge-shaped bill.

61. *Arenaria morinella*.

TURNSTONE.

Arenaria morinella (Linn.), Syst. Nat. 12th ed. i. p. 249, 1766 (Coast of Florida).

Arenaria interpres Sharpe, Cat. B. Brit. Mus. xxiv. p. 92, 1896 ; Quelch, Timehri (2) x. p. 268, 1896 (Coast District).

“ White-winged Plover ” (Quelch).

Adult male. Upper back, top of head, forehead, breast and sides of neck, scapulars, primaries, upper tail-coverts, and tail black or dark brown varied with chestnut on the upper back, scapulars, and wings, and with white on the tail, wings, hind-neck, sides of face, and throat ; lower back, rump, and under

surface from the breast downwards white, including the under wing-coverts and axillaries. "Bill black ; feet deep orange-red, claws black ; iris hazel."

Total length 230 mm., culmen 25, wing 145, tail 58, tarsus 28.

Adult female. Similar to the adult male.

Immature. Differs chiefly from the adult by the absence of the chestnut on the upper surface.

The descriptions are taken from examples obtained on the Abary River.

Breeds in the Arctic Regions.

Range in British Guiana. Abary River (*McConnell collection*).

Extralimital Range. South America generally and the greater portion of the known world.

Habits. According to Schomburgk (*Reis. Guian.* iii. p. 751) this bird is found on the coast and the mouths of the oceanic rivers of British Guiana.

Mr. J. J. Quelch (*Timehri* (2) x. p. 268) observed this species in British Guiana, and remarks :—"Closely allied to the Golden Plover is the Turnstone (*Streptopus interpres*), locally known as the White-winged Plover. A special feature of this species lies in the fact of its being as common in the Old World as it is in the New, a feature already pointed out as quite exceptional in the avifauna of the two regions. In the Old World it is known to nest in extreme N.W. Europe in the early summer, passing later to the south, extending from England to Siberia, and thence migrating to Southern Asia and Africa, Polynesia, and New Zealand for the winter, and returning to its usual haunts for breeding in the spring.

"In the New World the Turnstone breeds in the Arctic regions generally, eastwards as far as Greenland, and passes through Canada and the United States southwards in the early spring in its migration.

"These birds frequent the open flats by the sea, where they will be found turning over with their beaks the seaweeds and stones, under which they seek the crustaceans and molluscs which form the chief part of their food. From this habit they have derived the common name by which they are chiefly known in both hemispheres. The local name 'White-winged Plover' is given on account of the white bar which crosses the inner part of the wing."

Genus **HOPLOXYPTERUS** Bonap.

Hoploxypterus Bonaparte, Compt. Rend. Paris, xliii. p. 415, 1856. Type
H. cayanus (Lath.).

This genus is distinguished by its black and white coloration, small size, the small spur on the carpal joint of the wing, and the absence of a hind-toe.



Fig. 27.—To show the absence of hind-toe.

62. *Hoploxypterus cayanus*.

SPUR-WINGED PLOVER.

Hoploxypterus cayanus (Lath.), Ind. Orn. ii. p. 749, 1790 (Cayenne); Sharpe, Cat. B. Brit. Mus. xxiv. p. 135, 1896 (Ourumi); Quelch, Timehri (2) x. p. 271, 1896; Brabourne & Chubb, B. S. Amer. i. p. 38, no. 369, 1912.

Hoploxypterus cayanus Cab. in Schomb. Reis. Guian. iii. p. 750, 1848; Salvin, Ibis, 1886, p. 177 (Roraima).

Adult male. Nape, middle of back, upper wing-coverts, and innermost secondaries earth-brown; forehead, sides of face, a band across the breast, primary-quills and tips of outer secondaries, a patch on the lower hind-neck black like the scapulars and tips of the tail-feathers; crown of head, sides of nape, and upper

hind-neck white, as also the throat, abdomen, axillaries, under wing-coverts, under tail-coverts, base of tail, upper tail-coverts, greater upper wing-coverts, and secondaries. "Bill pink at the base, reddish brown at the tip; feet and toes pink; eyelid and iris pink" (*H. Whitely*).

Total length 206 mm., culmen 27, wing 137, tail 61, tarsus 49.

Adult female. Similar in colour of plumage but apparently larger in size. Wing 142 mm.

The male described was collected at the Upper Takutu Mountains.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Great Savannas (*McConnell collection*); Mount Roraima, Ourunei (*H. Whitely*); Takutu River (*Schomburgk*).

Extralimital Range. Surinam (*Penard*), Ecuador, Peru, South Brazil.

Habits. Respecting this bird Schomburgk (*Reis. Guian. iii. p. 750*) says that he found this beautiful species common, though always in pairs, on the Takutu River. Its habits of nidification were unknown to him. The "Macusis" call it *Teribei*.

Mr. J. J. Quelch (*Timehri* (2) x. p. 271) gives the following note:—"The Spur-wing Plover (*Holopterus cayanus*), this species is much more commonly met with on the coast in the winter months, though it remains with us throughout the year, being especially abundant along the interior streams."

Genus **BELONOPTERUS** Reichenb.

Belonopterus Reichenbach, *Nat. Syst. Vögel*, p. xx (20), 1852. Type *B. cayennensis* (Gmel.).

The characters by which this genus is differentiated are the large size, elongated occipital crest, and the presence of a hind-toe.

63. *Belonopterus cayennensis*.

CAYENNE LAPWING.

Belonopterus cayennensis (Gmel.), *Syst. Nat. i. p. 706*, 1789 (Cayenne); Sharpe, *Cat. B. Brit. Mus.* xxiv. p. 163, 1896 (Quonga, Aunai); Quelch, *Timehri* (2) x. p. 271, 1896; Brabourne & Chubb, *B. S. Amer. i. p. 38*, no. 371, 1912.

Vanellus cayennensis Cab. in Schomb. *Reis. Guian. iii. p. 750*, 1848;

Brown, *Canoe and Camp Life*, p. 104, 1876; Quelch, *Timehri* (2) ii. p. 372, 1888 (Abary River).

"Savanna Plover," "Savanna Pewit" (*Brown*); "Bucktown Spurwing," "American Pewit or Lapwing" (*Quelch*).



Fig. 28.—To show the occipital crest.

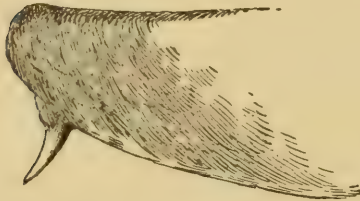


Fig. 29.—To illustrate the spur on the wing.

Adult male. Back, scapulars, and tertials olive-brown with bronzy reflections; short scapulars iridescent copper colour; lesser upper wing-coverts metallic purple and green; outer median and greater series whitish, the inner ones ash-grey like the outer webs of the secondary quills; bastard-wing, primary-quills, and apical portion of the secondaries black; upper and under tail-coverts white like the abdomen, axillaries, and under wing-coverts; tail white at base, followed by a broad, bluish-black band, and tipped with grey; crest-feathers, forehead, throat, and breast glossy bluish-black, skirted on the forehead and sides of face with white; hinder crown, sides of face, and neck all round pale earth-brown, more or less glossy on the top of the head. "Bill pale red at the base, the tip blackish brown; feet greyish brown, the joints red; iris sealing-wax red."

Total length 320 mm., culmen 32, wing 220, tail 92, tarsus 79.

Adult female. Similar to the adult male. "Bill reddish purple, the point black; thighs reddish purple; feet, toes, and claws black; eyelid reddish purple; iris red" (*H. Whitely*). Wing 222 mm.

The birds described were collected on the Abary Creek in October 1888 and the Abary River in July 1906.

Breeding-season. Unrecorded in British Guiana.

Nest. } Nidification the same as that of the Common Lapwing
Eggs. } (*Schomburgk*).

Range in British Guiana. Upper Takutu Mountains, Great Savanna, Abary River (*McConnell* collection); Quonga, Annai (*H. Whitely*); Abary River (*Quelch*); Savannas (*Brown*).

Extralimital Range. Surinam (*Penard*), Venezuela, Colombia, Central and Southern Brazil.

Habits. Schomburgk states (*Reis. Guian.* iii. p. 750) that he found this species in large flocks on the Savannas and on the borders of the Savanna rivers. When met with on the former it keeps to the dryer places. Its food consists of insects, snails, and worms. Its general habits are like those of the Common Lapwing, as is also its nidification. The "Macusis" and "Are-kunas" call it *Tarau-tarau*.

We quote the following note from Mr. Barrington Brown (*Canoe and Camp Life*, p. 104):—"In recrossing the Savanna to the boats we started a large flock of Savanna Plover (*Vanellus cayennensis*), a kind of Pewit, identical in form and size with the English Green Plover. Their flight is the same, and they wheeled over the plain in great numbers. Their colour, however, is a slaty cast, and they have a red iris, with a red spur on the wing at the end of the portion supporting the secondary feathers. The Savanna Pewit also is never eaten by Indians, as they say that partaking of its flesh produces deafness."

Mr. J. J. Quelch (*Timelri* (2) ii. p. 372) met with species on the Abary River, and remarks:—"Just below this point, where there is a small extent of swampy ground, the Crested Lapwing (*Vanellus cayennensis*), locally termed the 'Bucktown Spurwing,' was seen for the first time, and one specimen was obtained. The bird is of a rare and most handsome species, the upper part of the body being of a glossy coppery hue, dashed with green and purple. The forehead, chin, breast, wings, and half the tail are black, and the rest of the body a pinkish white. The head is furnished with a long narrow crest, and the wings are furnished with a powerful spine. The legs are long and red or bluish-red and furnished with four toes, of which the hindmost is rudimentary and not applied to the ground."

Genus **PLUVIALIS** Briss.

Pluvialis Brisson, Orn. v. p. 42, 1760. Type *P. pluvialis* (Linn.).

The chief characters which distinguish this genus are the absence of a hind-toe, and the somewhat stout bill with a swollen dertrum.



Fig. 30.—To show the form of the bill.



Fig. 31.—To show the absence of the hind-toe.

64. *Pluvialis dominicus*.

AMERICAN GOLDEN PLOVER.

Pluvialis dominicus (P. L. S. Müll.), Syst. Nat. Suppl. p. 116, 1776 (S. Domingo); Brabourne & Chubb, B. S. Amer. i. p. 38, no. 375, 1912.

Charadrius virginianus Cab. in Schomb. Reis. Guian. iii. p. 750, 1848.

Charadrius virginicus Salvin, Ibis, 1886, p. 178 (Yuruani River, 2700 ft.); Quelch, Timehri (2) ii. p. 363, 1888 (Abary River); id. op. cit. v. p. 107, 1891 (Georgetown); id. op. cit. x. p. 266, 1896 (migration).

Charadrius dominicus Sharpe, Cat. B. Brit. Mus. xxiv. p. 195, 1896 (Roraima).

“Black-breasts,” “Greenbacks” (Quelch).

Adult male. Upper parts black, varied with yellow and white spots, and also white edgings to some of the feathers, becoming pale brown on the greater upper wing-coverts and dark brown on the bastard-wing, primary-coverts, and quills, the last being much paler on the inner webs; tail-feathers brown with whitish bars; forehead and eyebrow white; a line under the eye and ear-coverts dark brown; under surface dark brown varied with grey or dull white; axillaries and under wing-coverts pale earth-brown.

Total length 237 mm., culmen 26, wing 180, tail 64, tarsus 40.

The female differs in being much more finely marked above and in the absence of black or dark brown below. Wing 179 mm.

The birds described are from the Abary River.

Breeding-season. Unknown in British Guiana.

Nest. “It scratches a small hollow in the sand in which it lays its two or three eggs” (Schomburgk).

Eggs. Undescribed from British Guiana.

Range in British Guiana. Abary River (McConnell collection); Yuruani River, 2700 ft., Mount Roraima (H. Whitely).

Extralimital Range. South America generally, North America, and the greater portion of the Old World.

Habits. Schomburgk (Reis. Guian. iii. p. 750) states that he found this bird very common on the whole of the coast, especially at the mouths of the rivers, where it prefers the sand-banks. It scratches a small hollow in the sand in which it lays two or three eggs.

As this bird lays four eggs in its own breeding-ground, in Arctic America, we are of opinion that Schomburgk has mistaken the identity of the bird, and we cannot rectify it.

Mr. J. J. Quelch (Timehri (2) ii. p. 363) observed this species on the Abary River, where he says that dense flights of "Black-breast" or Golden Plovers (*Charadrius virginicus*) occasionally came down the creek or settled in patches by the waterside.

The following notes on the migration of this species are also quoted from Mr. J. J. Quelch (Timehri (2) x. p. 266):—"The most common of these migrants is certainly the American Golden Plover (*Charadrius virginicus*), known also as Black-breasts and Greenbacks. Arriving here sparsely in August, they increase in numbers in September and October, gradually disappearing in the latter month, until in November, with the exception of a few stragglers which may have been left behind, they pass southwards in their further migration. On the lowlands of the coast, on the grassy spaces, and on the sandbanks, they will be found in often quite large flights, though it is reported that the numbers recently noticed are markedly fewer than in former years, while at the same time they vary greatly from year to year. On the interior savannahs specimens have also been taken, but from their fewness they should no doubt be regarded as stragglers. Richard Schomburgk, in his 'Reisen in British Guiana,' records the nesting of this species on the sand-banks of the coast, the eggs being from 2 to 3 in number; but unless some mistake was made as to the species, the nesting can only have been quite occasional and due to stragglers. The flesh of the bird, as in the case of nearly all our migrants, is greatly in request for the table, and large numbers of them are shot in the season. This continuous slaughter, which they meet with along their entire course of migration, is no doubt chiefly responsible for the very large reduction in the numbers which are observed to appear during the spring in the northern latitudes, as contrasted with those that left during the autumn. Though they are shy and timid, they seldom fly for any great distance before they settle again after being disturbed, and owing to the large numbers in a flight, it is not difficult to secure them in quantity.

"The American Golden Plover was for a long time confounded with the European species, but the latter can readily be dis-

tinguished by its white axillary wing-feathers as against the light brown feathers of the local forms, while it is also slightly larger—though the latter character would hardly be noticed except from a very close comparison.

“Considerable differences of opinion, too, exist as regards this bird, as to its specific identity with, or difference from, the common smaller Asiatic plover, which is closely similar to it. Quite recently they have been included in one and the same species under the name *dominicus*.

“This plover can readily be recognised among the other migrants with which it is found. The beak is short, being slightly shorter than the head, straight, and curving slightly at the tip. The upper plumage is mottled with black and greenish-yellow, which gives a peculiar greenish tinge to the bird. The under surface is either mottled with black and white, the black being in large patches, or is whitish, while the young are much duller throughout. The toes are three in number, the hinder toe being absent. The length of the body is nearly 11 inches.

“The American Golden Plovers are known to breed high up in the Arctic regions of North America, from Alaska to Greenland, whither they pass in the early spring through the United States and Canada. At the end of summer, after breeding, they migrate in parties, the greater number of the young birds apparently passing southwards through the United States by an overland route during August and September, while the greater number of older birds start out southwards by a sea-route, past the Bermudas, thence to the West India Islands and South America, in which latter continent they are found as far south as Buenos Ayres. After their extremely long sea-journey, it is said they are sometimes so exhausted and tame when they reach the West Indies that they can be knocked down with sticks and stones.”

Genus **CHARADRIUS** Linn.

Charadrius Linné, Syst. Nat. 10th ed. i. p. 150, 1758. Type *C. hiaticula* Linn.

The members of this genus differ from those of *Pluvialis* by their smaller size, white under surface, and the basal web which connects the outer and middle toes.

Key to the Species.

- A. Larger, wing more than 110 mm.
 a. Sides of face and band on hind-neck rufous; bill larger, more than 15 mm. *C. wilsoni*, p. 108.
 b. Sides of face and band on hind-neck black; bill smaller, less than 15 mm. *C. semipalmatus*, p. 109.
 B. Smaller, wing less than 110 mm.; collar on fore-neck (in winter plumage) incomplete *C. collaris*, p. 110.

65. *Charadrius wilsoni*.

WILSON'S PLOVER.

- Charadrius wilsoni* Ord, in Wilson's Amer. Orn. ix. p. 77, pl. lxxiii. fig. 5, 1814 (Cape Island, New Jersey); Brabourne & Chubb, B. S. Amer. i. p. 39, no. 377, 1912.
Charadrius crassirostris Cab. in Schomb. Reis. Guian. iii. p. 750, 1848.
Ægialitis wilsonia Quelch. Timehri (2) x. p. 271, 1896 (migration).
Ochthodromus wilsoni Sharpe, Cat. B. Brit. Mus. xxiv. p. 214, 1896.

"The Great-billed or Wilson's Plover" (*Quelch*).

Adult female (summer plumage). General colour above earth-brown including the back, upper wing-coverts, scapulars, and long innermost secondaries; bastard-wing, primary-coverts, and quills blackish more or less tipped and edged with white; middle tail-feathers blackish towards the tips, lateral feathers for the most part white; crown of head and sides of the neck similar to the back but tinged with rufous; a spot in front of the eye, a line across the fore part of the head, and a band on the fore-neck black, the last more or less tinged with rufous; above and behind the eye rufous, extending on to the hind-neck; forehead, throat, and entire under surface white.

Total length 180 mm., culmen 21, wing 121, tail 47, tarsus 28.

The bird described is in the British Museum and was collected by A. Goering at Carupano, Venezuela—Salvin-Godman collection.

Adult female (winter plumage). Differs chiefly from the summer plumage by the absence of the black line across the fore part of the head and the black band on the fore-neck, the latter being represented by an earth-brown band.

The female in winter plumage from which the description is taken was obtained on Margarita Island, Venezuela, by Dr. P. R. Lowe, on January 6, 1904, and presented to the British Museum by the Countess of Wilton.

Breeds in the Arctic regions and is a winter migrant in British Guiana.

Range in British Guiana. No locality recorded.

Extralimital Range. South Brazil, Peru, Margarita Island, Central and North America.

Habits. According to Schomburgk (Reis. Guian. iii. p. 750) the habits and distribution of this species are the same as those of *Charadrius virginianus* = *Pluvialis dominicus*, p. 105.

Mr. J. J. Quelch (Timehri (2) x. p. 271) observed this species in British Guiana, and remarks :—"The second migrant of the genus, the Great-billed or Wilson's Plover (*A. wilsonia*). This species does not appear to be a common migrant here, though no doubt it may have been confounded with *Holopterus cayanus*, the Spur-wing Plover."

66. *Charadrius semipalmatus*.

SEMIPALMATED PLOVER.

Charadrius semipalmata Bonap. Journ. Acad. Nat. Sci. Philad. v. p. 98, 1825 (Coast of New Jersey); Brabourne & Chubb, B. S. Amer. i. p. 39, no. 380, 1912.

Charadrius brevirostris Cab. in Schomb. Reis. Guian. iii. p. 750, 1848.

Egialitis semipalmata Salvin, Ibis, 1886, p. 178.

Ægialitis semipalmatus Sharpe, Cat. B. Brit. Mus. xxiv. p. 250, 1896; Quelch, Timehri (2) x. p. 270, 1896 (migration).

Adult (winter plumage). General colour above earth-brown including the top of the head, sides of the face, a band across the chest, back, wings, and tail; forehead, throat, a narrow collar on the hind-neck, and a bar on the wing white like the abdomen, under tail-coverts, axillaries, and under wing-coverts; bastard-wing, primary-coverts, quills, and tips of tail-feathers blackish. "Bill black, basal half deep orange; feet pale flesh-colour, claws black; iris deep hazel."

Total length 150 mm., culmen 13, wing 124, tail 52, tarsus 25.

The specimen described was taken on the Abary River in September 1907.

Adult (summer plumage). Differs in having a broad black band across the fore part of the head, sides of the face, and a complete collar round the neck also black.

Breeds in the Arctic regions and occurs in British Guiana during the autumn and winter.

Range in British Guiana. Abary River (*McConnell collection*).

Extralimital Range. South America generally, Galapagos, West Indies, Central and North America.

Habits. According to Schomburgk (*Reis. Guian.* iii. p. 758) this bird is found on the sand- and mussel-banks of the coast.

Mr. J. J. Quelch (*Timehri* (2) x. p. 270) states that this bird "Arrives here in September, and during the later months it appears to pass further and further south, but representatives are met with throughout the winter."

67. *Charadrius collaris*.

COLLARED PLOVER.

Charadrius collaris Vieill. *N. Diet. d'Hist. Nat.* xxvii. p. 136, 1818

(Paraguay); Bradbourne & Chubb. *B. S. Amer.* i. p. 39, no. 381, 1912.

Charadrius azaræ Cab. in Schomb. *Reis. Guian.* iii. p. 751, 1848.

Ægialitis collaris Salvin. *Ibis*, 1886. p. 178 (*Bartica Grove*); Sharpe, *Cat. B. Brit. Mus.* xxiv. p. 288, 1896; Quelch, *Timehri* (2) x. p. 270, 1896.

"Small Ring Plover" (*Quelch*).

Adult male. General colour above earth-brown tinged with rufous, which is more intense on the top of the head, ear-coverts, and sides of neck; bastard-wing, primary-coverts, and quills dark brown, the latter with white shafts and white tips to the secondaries and inner primaries; outer tail-feathers white, the central ones brown; fore part of head, loreal streak, and band across the chest black; forehead, throat, and remainder of the under surface white, as also the axillaries and under wing-coverts. "Bill black; feet flesh-colour; iris brown."

Total length 130 mm., culmen 16, wing 96, tail 45, tarsus 26.

Adult female. Similar to the adult male both in colour of plumage and measurements.

The male described was collected on the Abary River in September 1907.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Abary River (*McConnell collection*); Bartica, Ourunei (*H. Whitely*).

Extralimital Range. The remainder of South America east of the Andes.

Habits. Mr. J. J. Quelch (Timehri (2) x. p. 270) observed this species in British Guiana, and remarks:—"The resident species, the Small Ring Plover (*Æ. collaris*) is the smallest, its length being 6 inches; the collar does not surround the neck; the top of the head is black, with white front and sides; while the upper surface generally has a markedly rufous tint."

Genus **HIMANTOPUS** Briss.

Himantopus Brisson, Orn. v. p. 33, 1760. Type *H. himantopus* (Linn.).

The characters which distinguish this genus are the very long thin legs, small body, and long slender bill.

68. *Himantopus mexicanus*.

BLACK-NECKED STILT.

Himantopus mexicanus (P. L. S. Müll.), Syst. Nat. Suppl. p. 117, 1776 (Mexico); Sharpe, Cat. B. Brit. Mus. xxiv. p. 320, 1896 (British Guiana); Brabourne & Chubb, B. S. Amer. i. p. 40, no. 388, 1912.

Hypsibates nigricollis Cab. in Schomb. Reis. Guian. iii. p. 758, 1848.

Himantopus nigricollis Salvin, Ibis, 1886, p. 178; Quelch, Timehri (2) x. p. 273, 1896.

"Red-legs or Longshanks" (*Quelch*).

Adult male. Head, sides of face, sides of neck, upper back, wings, both above and below, glossy black, as also a spot on each side of the breast under the wing; forehead, a circle round the eye, entire under surface, axillaries, lower back, and upper tail-coverts white; tail dusky grey. "Bill black; legs and feet fine rose-pink or delicate pale lake-red; iris rosy carmine."

Total length 290 mm., culmen 65, wing 224, tail 74, tarsus 109.

Adult female. Similar to the adult male, but differs in having the scapulars and back dusky brown, instead of black. Wing 215 mm.

The description of the male is that of an example obtained on the Abary River in July 1906.

Breeding-season. Unknown in British Guinea.

Nest. Unrecorded in British Guinea.

Eggs. Undescribed from British Guinea.

Range in British Guiana. Abary River (*McConnell* collection).

Extralimital Range. North-east Brazil, Venezuela, Colombia (in South America), Galapagos, North and Central America, and the West India Islands.

Habits. Schomburgk states (Reis. Guian. iii. p. 758) that this Stilt lives on the sand-banks and along the shore.

Mr. J. J. Quelch (Timehri (2) x. p. 273) observed this species in British Guiana, and remarks:—"A very curious and distinct form, which is certainly a migrant in the United States, and one that is by no means a common resident or an obtrusive migrant here, is the Black-necked Stilt, familiarly known also as Red-legs or Longshanks (*Himantopus nigricollis*). This bird is to be found here at all times of the year, but more especially at the beginning of the drying off of the water of the heavy wet season, when they may occasionally be met with in pairs on the grassy lands of the coast or on the mudflats."... "It is a remarkable thing that, when the bird stands upon one leg and the other is drawn up near the body, in spite of the great length of the limb, it is hidden entirely in the feathers of the breast and abdomen, so that not a vestige of it is exposed. To the closest observation the bird appears then to be decidedly one-legged. Its perfect balance, too, is noteworthy, more especially considering the absence of the hind-toe.

"It was curious to note, in the case of a bird which was kept in confinement for some weeks, that whenever worms were given to it, it invariably dropped them in the little tank of water in its cage before eating them."

Genus **NUMENIUS** Briss.

Numenius Brisson, Orn. v. p. 261, 1760. Type *N. arquatus* (Linn.).

The chief characters which distinguish the members of this genus are the arched bill, the transverse scutes on the front of the tarsus, and the reticulations on the hinder aspect.

Key to the Species.

- | | |
|---|------------------------------------|
| A. Larger, wing more than 220 mm., culmen more than 80; primary-quills barred or notched with buff on the inner web | <i>N. hudsonicus</i> ,
[p. 113. |
| B. Smaller, wing less than 220 mm., culmen less than 80; inner webs of primary-quills uniform | <i>N. borealis</i> ,
[p. 114. |



Fig. 32.—To show the curved bill.

69. *Numenius hudsonicus*.

HUDSONIAN WHIMBREL.

Numenius hudsonicus Lath. Ind. Orn. ii. p. 712, 1790 ("Habitat in sinu Hudsonis"); Salvin, Ibis, 1886, p. 180; Quelch, Timehri (2) x. p. 275, 1896; Sharpe, Cat. B. Brit. Mus. xxiv. p. 364, 1896; Brabourne & Chubb, B. S. Amer. i. p. 40, no. 390, 1912.

Numenius phæopus (nec Linn.), Cab. in Schomb. Reis. Guian. iii. p. 757, 1848.

The "Jack Curlew or American Whimbrel" (Quelch).

Adult female. General colour above pale brown irregularly marked with white or buffy-white; tail regularly barred with buffy-white; bastard-wing, primary-coverts, and primary-quills dark brown, the latter notched on the inner webs with buff, the secondaries somewhat paler and marked on both webs; head brown like the back; superciliaries and a longitudinal line on the middle of the crown whitish; throat white; sides of face, neck all round, and breast buffy-white with brown shaft-streaks to the feathers, the brown pattern being submarginal or irregular bars on the abdomen, sides of body, and under tail-coverts; axillaries and under wing-coverts barred with pale brown and sandy buff. "Bill brownish black, basal half of the lower mandible flesh-colour; feet greyish blue, claws black; iris dark brown."

Total length 430 mm, culmen 91, wing 246, tail 91, tarsus 61.

Adult male. Similar to the adult female, but rather smaller in size. Culmen 82 mm., wing 230.

The female described was collected on the Berbice River in November 1895.

Breeds in the Arctic Regions and is a winter visitor to British Guiana.

Range in British Guiana. Abary River, Berbice River (McConnell collection).

Extra-limital Range. Western coast of South America to Chile. The whole of North America.

Habits. Schomburgk states (Reis. Guian. iii. p. 757) that he found this bird common on the mussel-banks in the mouth of the River Waini.

We quote the following notes from Mr. J. J. Queleh (Timebri (2) x. p. 275):—"The Jack Curlew or American Whimbrel (*Numenius loudonensis*). This species is one of the commonest of our migrants, being found plentifully during the winter months along the mudflats and sandy banks of the coast, as well as on the shores of the alluvial islands and along the estuaries of the rivers. At all times of the day, but more especially in the early morning and late evening, they will be found feeding on the small fish, crustacea, worms, etc., which occur so plentifully on the flats. At such times they are by no means shy, and can be shot with but little difficulty. . . . It is known to breed in the extreme north of North America, and extends its southward range over the whole of South America. It has even once been recorded from Spain."

70. *Numenius borealis*.

ESQUIMO WHIMBREL.

Numenius borealis (Forst.). Phil. Trans. lxii. p. 431, 1772 ("Habitat in sinu Hudsonis"); Sharpe, Cat. B. Brit. Mus. xxiv. p. 368, 1896; Brabourne & Chubb, B. S. Amer. i. p. 40, no. 391, 1912.

Adult female. General colour of the upper surface dark brown including the head, back, and wings everywhere spotted, barred, streaked, or margined with buffy-white or sandy buff; tail dark brown regularly banded with paler brown; bastard-wing and primary-coverts narrowly edged with white at the tips; quills dark brown, paler on the inner webs; crown of head like the back with a few white feathers interspersed; throat white; lores and superciliaries white with minute dark centres to the feathers; under surface including the sides of the body creamy-white with dark markings on the feathers, in the form of bars or sagittate shaft-lines; axillaries and under wing-coverts rufescent marked with pale brown. "Bill brownish black; lower mandible flesh-colour at the base; feet greyish blue, claws black; iris dark brown."

Total length 330 mm., culmen 62, wing 205, tail 80, tarsus 44.

Adult male. Similar to the adult female, but the bill rather shorter. Culmen 53 mm.

The female described has no exact locality.

This species breeds in Arctic America and migrates south in winter.

Range in British Guiana. Unknown.

Extralimital Range. South America generally and the Falkland Islands.

Habits. Unrecorded in British Guiana.

Genus **LIMOSA** Briss.

Limosa Brisson, Orn. v. p. 261, 1760. Type *L. limosa* (Linn.).

This genus is at once distinguished from *Numenius* by its straight or slightly upturned bill, which is about equal in length to that of the tail.

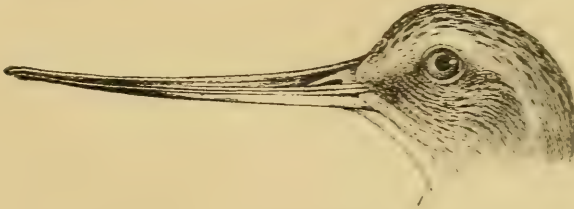


Fig. 33.—To show the slightly upturned bill.

71. *Limosa hæmastica*.

HUDSONIAN GODWIT.

Limosa hæmastica (Linn.). Syst. Nat. i. p. 147, 1758 (Hudson Bay);
Brabourne & Chubb, B. S. Amer. i. p. 40, no. 392, 1912.

Limosa hudsonica (Lath.). Sharpe, Cat. B. Brit. Mus. xxiv. p. 388,
1896; Quelch, Timehri (2) x. p. 274, 1896 (Coast of British
Guiana).

“Red-breasted Godwit or Marlin” (*Quelch*).

Adult female (summer plumage). General colour of the upper surface black with white or buff edges and bars to the feathers; rump dusky black with slight indications of pale edges to the feathers; short upper tail-coverts with dark marks at the tips, long upper tail-coverts and tail blackish, the latter marked with white, buff, and grey; bastard-wing, primary-coverts, and quills black, the latter having white shafts and brown inner webs, secondaries pale brown with white tips; head streaked with brown and white; sides of face and throat buffy-white with dark shaft-lines; fore-

neck rufous with brown centres to the feathers ; breast and abdomen rufous with dark bars and white fringes to the feathers, the under tail-coverts similar but much more coarsely marked ; axillaries and under wing-coverts dusky black with white margins to the latter.

Total length 320 mm., culmen 77, wing 210, tail 79, tarsus 58, middle toe and claw 37.

Adult female. Similar to the adult male.

This species is not represented in the McConnell collection, and the descriptions are taken from examples in the British Museum.

Adult male (winter plumage). General colour on the upper parts dusky grey, more or less marked with pale spots or edgings to the feathers of the back and wings ; eyebrow, throat, vent, and under tail-coverts dull white ; neck all round and breast grey, paler and inclining to buff on the abdomen.

Habits. The only reference we possess of the occurrence of this species in British Guiana is that of Mr. J. J. Quelch (Timehri (2) x. p. 274), from which we have copied the following note :—“ Another migrant which will at once be recognised by its thin, long, and flexible beak, and its long, slender, light blue legs, with four toes, is the Red-breasted Godwit or Marlin (*Limosa hudsonica*). This bird is but seldom obtained on the coast in the Colony, though considering its range, it must pass through equatorial America in considerable numbers on its way south.”

This species is known to breed as far north as the Arctic regions of North America, and ranges in the winter to the extreme south of South America.

Genus **LIMNODROMUS** Wied.

Limnodromus Wied, Beitr. Nat. Brasil, iv. p. 716, 1833. Type *L. griseus* (Gmel.).

This genus differs from *Limosa* in its smaller size, the widening of the bill at the tip, and the pitting on the apical portions of the upper and lower mandibles.

72. *Limnodromus griseus*.

RED-BREASTED SANDPIPER.

Limnodromus griseus (Gmel.), Syst. Nat. i. p. 658, 1789 (“Habitat in Noveboraci maritimis”); Brabourne & Chubb, B. S. Amer. i. p. 41, no. 394, 1912.

Macrorhamphus griseus Cab. in Schomb. Reis. Guian. iii. p. 758. 1848; Salvin, Ibis, 1886, p. 179; Sharpe, Cat. B. Brit. Mus. xxiv. p. 394, 1896; Quelch, Timehri (2) x. p. 276, 1896.

Adult male. Head, back, scapulars, inner secondaries, and inner greater upper wing-coverts blackish brown with rufescent spots or edgings to the feathers; rump white with dark centres and white fringes to the feathers giving a spotted appearance; upper tail-coverts and tail barred with brown and white; hind-neck dusky brown; supraloral streak and line over the eye white; lores and feathers in front of the eye dusky; chin, throat, and entire under surface white with a wash of pale ochreous and small brown centres to the feathers which become enlarged on the sides of the body and formed into triangular spots on the under tail-coverts; axillaries white with diagonal bars of pale brown; under wing-coverts pale brown, shaft-streak and margins of the feathers white.

Total length 265 mm., culmen 65, wing 143, tail 54, tarsus 34.

Adult female. Similar to the adult male, but slightly larger. Wing 150 mm.

We do not know the exact locality of the male described.

This species breeds in the high north and is a winter visitor to British Guiana.

Range in British Guiana. The only records of this species that we have been able to find are those of Schomburgk, Mr. J. J. Quelch, and the two examples that are in the McConnell collection, but the last have no exact localities.

Extralimital Range. Brazil, Peru, and Colombia in South America, Central America, West India Islands, and North America.

Habits. Schomburgk states (Reis. Guian. iii. p. 758) that this species is found on the sand- and mussel-banks of the coast.

Mr. J. J. Quelch (Timehri (2) x. p. 276) met with this species in British Guiana and remarks:—"It has already been mentioned that the true Snipes of the Colony are resident species, and this is certainly the case with regard to our two species of *Gallinago* proper. The Red-breasted Snipe (*Macrorhamphus griseus*), however, which breeds in the extreme north, migrating for the winter to Central and South America and the West Indies, certainly visits us, though the birds seem to be but rarely obtained. Stragglers have at times been taken in Great Britain and on the continent of Europe."

Genus **CATOPTROPHORUS** Bonap.

Catoptrophorus Bonaparte, Ann. Lyc. New York, ii. p. 323, 1827. Type *C. semipalmatus* (Gmel.).

The chief characters by which this genus is distinguished are the webs connecting the outer and inner toes with the middle toe.

73. *Catoptrophorus semipalmatus*.

WILLET.

Catoptrophorus semipalmatus (Gmel.), Syst. Nat. i. p. 699, 1789 ("Habitat in Noveboraco"); Cab. in Schomb. Reis. Guian. iii. p. 758, 1848; Brabourne & Chubb, B. S. Amer. i. p. 41, no. 396, 1912.

Symphemia semipalmata Salvin. Ibis, 1886, p. 179; Sharpe, Cat. B. Brit. Mus. xxiv. p. 405, 1896; Quelch, Timehri (2) x. p. 276, 1896.

"Stone Snipe or Curlew," "White-winged Curlew" (*Quelch*).

Adult male. General colour above ash-grey, including the head, back, and wings, with dark shaft-lines to some of the feathers; lesser median and greater upper wing-coverts margined or mottled with white; bastard-wing, marginal coverts, and primary-coverts blackish narrowly edged with white; quills white, blackish at the tips and entire outer web of first primary, secondaries for the most part white with a small amount of dark brown near the tip of some of the outer ones, innermost secondaries like the back; upper tail-coverts and tail white with pale brown mottling near the tip of the latter; supraloral streak and a spot above the eye white; lores and feathers in front of the eye somewhat darker than the crown; throat and entire under surface white with a wash of grey on the fore-neck and sides of the breast; axillaries and under wing-coverts black margined or tipped with white. "Bill light blue, dusky towards the end; feet light blue, claws black; iris brown."

Total length 300 mm., culmen 59, wing 200, tail 69, tarsus 57.

Adult female. Similar to the adult male. Wing 192 mm.

The male described was collected on the Abary River in November 1906, and the female on the Berbice River in November 1895.

Although Mr. J. J. Quelch states that this species is obtainable at all times of the year in British Guiana, we have not found any record of its breeding in the Colony.

Breeds in North America and migrates south in winter.

Range in British Guiana. Abary River, Berbice River (*McConnell collection*); grassy pastures of the Coast (*Quelch*).

Extralimital Range. Peru, South America, West India Islands, Central and North America.

Habits. Mr. J. J. Quelch (*Timehri* (2) x. p. 276), gives the following note:—"In the grassy pastures of the coast, but more usually on the flats, will be found the Willet or Stone Snipe or Curlew (*Symphemia semipalmata*), generally known here as the White-winged Curlew from the white bars and edgings of the wings. The bird is known to range as far north as the United States and Canada, where it breeds, descending to the Equatorial districts of South America in its migration. Specimens of this species are obtainable in the Colony at all times of the year as stragglers, though during the season of migration, and during the winter months, they are much more numerous."

Schomburgk mentions having met this species on the coast.

Genus **TOTANUS** Bechst.

Totanus Bechstein. Orn. Taschenb. ii. p. 282. 1803. Type *T. totanus* (Linn.).

The members of this genus differ from *Catoptrophorus* in having a thinner and more slender bill and by having a web between the outer and the middle toe only.

Key to the Species.

- | | |
|---|----------------------------------|
| A. Larger, wing more than 170 mm.; culmen more than 50 mm.; tarsus more than 55 mm. | <i>T. melanoleucus</i> , p. 119. |
| B. Smaller, wing less than 170 mm.; culmen less than 50 mm.; tarsus less than 55 mm. | <i>T. flavipes</i> , p. 121. |

74. *Totanus melanoleucus*.

GREATER YELLOWSHANKS.

Totanus melanoleucus (Gmel.). Syst. Nat. i. p. 659. 1789 ("Habitat auctumno in arenis littoris Labrador"); Cab. in Schomb. Reis. Guian. iii. p. 757. 1848; Salvin. Ibis, 1886. p. 180; Sharpe. Cat. B. Brit. Mus. xxiv. p. 426. 1896; Quelch. *Timehri* (2) x. p. 271,

1896 (Interior Savannas): Brabourne & Chubb, B. S. Amer. i.
p. 41, no. 397, 1912.

"Pica Plover" (*Quelch*).

Adult male. Upper surface pale brown, the feathers everywhere



Fig. 34.—To illustrate the shape of the bill.



Fig. 35.—To show the web between the outer and the middle toe.

spotted or edged with white; upper tail-coverts white faintly
barred with brown; tail pale brown barred or mottled with white;
lastard-wing, primary-coverts, and quills blackish, paler on the

inner webs of the latter ; under surface white spotted or streaked with pale brown on the sides of the face, fore-neck, sides of body, lateral under tail-coverts, axillaries, and under wing-coverts. "Bill black, tinted with bluish grey at the base ; feet bright yellow, claws brownish black ; iris dark brown."

Total length 305 mm., culmen 62, wing 188, tail 73, tarsus 62.

Adult female. Similar to the adult male. Wing 200 mm.

The description of the male is taken from an example collected on the Kamakabra River in 1911.

Breeds in North America, migrating south in winter.

Range in British Guiana. Kamakabra River, Kamarang River, Abary River (*McConnell collection*).

Extralimital Range. South America to the Straits of Magellan, Central America, West India Islands, and North America.

Habits. Schomburgk says (*Reis. Guian. iii. p. 757*) that he met with this bird on the sand- and mussel-banks of the coast.

We quote the following notes from Mr. J. J. Quelch (*Timehri*, (2) x. p. 271) :—"The Big Yellowshanks (*Totanus melanoleucus*), known locally as the Pica Plover. The Pica arrives here on the coast with the Golden Plover, and leaves at about the same time, but many stragglers remain throughout the marshy alluvial islands. They are occasionally met with in the early part of March, though it is by no means certain whether these are returned migrants from the far south or collected groups from our interior savannahs. They are known to breed high up in the northern latitudes."

75. *Totanus flavipes*.

YELLOWSHANKS.

Totanus flavipes (Gmel.), *Syst. Nat. i. p. 659. 1759* ("Habitat aetumno in Novæboraco"); Cab. in Schomb. *Reis. Guian. iii. p. 757. 1848*; Salvin, *Ibis. 1886, p. 180* (Bartica Grove, Camacusa); Sharpe, *Cat. B. Brit. Mus. xxiv. p. 431, 1896*; Quelch, *Timehri* (2) x. p. 272. 1896 (migration); Brabourne & Chubb, *B. S. Amer. i. p. 41, no. 398, 1912*.

Adult male. Upper parts greyish brown, the feathers everywhere edged or spotted with white ; upper tail-coverts white faintly barred with greyish brown ; tail greyish brown mottled and barred with white ; sides of face and entire under surface white marked with pale brown on the sides of the face, throat, breast, sides of body, lateral under tail-coverts, axillaries, and under wing-coverts. "Bill black ; feet bright yellow ; iris dark brown."

Total length 225 mm., culmen 38, wing 160, tail 62, tarsus 51.

Adult female. Similar to the adult male. Wing 154 mm.

The male described was taken on the Abary River in September 1907.

This bird breeds in North America and occurs in British Guiana only in winter.

Range in British Guiana. Bonasika River, Essequebo River, Abary River (*McConnell collection*); Bartica, Kamakusa (*Whitely*).

Extralimital Range. South America generally, West India Islands, Central and North America, accidental in Europe.

Habits. According to Schomburgk (*Reis. Guian.* iii. p. 757) this species inhabits the mussel-banks in the mouth of the River Waini.

Mr. J. J. Quelch (*Timehri*, (2) x. p. 272) makes the following remarks on the species:—"The small or common Yellowshanks (*Totanus flavipes*), which comes as a migrant in August and departs in October and November. These birds are known to breed as far north as Arctic America, and to range south to Patagonia. Many stragglers remain with us throughout the winter."

Genus **TRINGA** Linn.

Tringa Linné, *Syst. Nat.* 10th ed. i. p. 148, 1758. Type *T. ocropus* Linn.

This genus is distinguished from *Totanus* by its much shorter tarsus, which only slightly exceeds the middle toe and claw in length.

76. *Tringa solitaria*.

SOLITARY SANDPIPER.

Tringa solitaria Wilson, *Amer. Orn.* vii. p. 53, pl. 58. fig. 2, 1813 (probably Pennsylvania); Brabourne & Chubb, *B. S. Amer.* i. p. 41, no. 399, 1912.

Rhyacophilus solitarius Salvin, *Ibis*, 1886, p. 180 (Mt. Roraima); Quelch, *Timehri* (2) x. p. 277, 1896.

Helodromus solitarius Sharpe, *Cat. B. Brit. Mus.* xxiv. p. 444, 1896 (Bartica Grove, Carimang River, Rupurumi River); Beebe, *Our Search for a Wilderness*, p. 263, 1910 (Matope).

"Wood Tattler" (*Quelch*).

Adult female. General colour above olive-brown, with white spots or edgings to the feathers of the back, wings, and middle

tail-feathers ; lesser upper wing-coverts, bastard-wing, primary-coverts, and quills black ; upper tail-coverts blackish barred and tipped with white ; outer tail-feathers white barred with blackish brown ; eyelids, loral streak, throat, breast, and abdomen white ; fore-neck, ear-coverts, sides of neck, and sides of breast dusky brown, the feathers margined with white on the fore-neck, giving a streaked appearance ; axillaries barred with black and white ; lesser under wing-coverts black edged with white, the greater series brown like the quill-lining. "Bill greenish black ; feet greenish grey, claws brownish black ; iris brown."

Total length 200 mm., culmen 30, wing 130, tail 56, tarsus 28, middle toe and claw 30.

Adult male. Similar to the adult female, but rather smaller. Wing 126 mm.

The description of the female is taken from an example obtained at Bartica in 1911.

Breeds in North America, and migrates south in winter.

Range in British Guiana. Upper Takutu Mountains, Takutu River, Ituribisi River, Bartica, Kamakabra River, Great Savannas (*McConnell collection*) ; Mount Roraima, Kamarang River, Rupununi River (*Whitely*) ; Matope (*Beebe*).

Extralimital Range. South America to Argentina ; Central America, West India Islands, and North America.

Mr. J. J. Quelch (*Timebri* (2) x. p. 277) gives the following notes on the species in British Guiana :—"Of the various Sandpipers, perhaps the commonest visitor is the Solitary Sandpiper or the Wood-Tattler (*Rhyncophilus solitarius*), which will be met with singly by the waterside in nearly all parts of the colony. Many of these small Sandpipers certainly remain with us all the year round. . . . These little birds are known to range in the breeding-season even as far north as the Arctic regions, migrating to the West Indies, Central and South America, even to Buenos Ayres in the winter. They have been obtained as stragglers in British Guiana."

Genus **ACTITIS** Illig.

Actitis Illiger, Prodr. Syst. Mamm. et Av. p. 263, 1811. Type *A. hypoleucos* (Linn.).

This genus is characterised by having short legs, the secondary quills nearly as long as the primaries, and a different coloration which is shown in the nestling.

77. *Actitis macularia*.

SPOTTED SANDPIPER.

Actitis macularia (Linn.), Syst. Nat. i. p. 249, 1766 ("Habitat in Europa et America septentrionali"); Brabourne & Chubb, B. S. Amer. i. p. 41, no. 400, 1912.

Tringoides macularius Salvin, Ibis, 1886, p. 180 (Camacusa, Bartica Grove); Quelch, Timehri (2) ii. p. 363, 1888 (Abary River), (2) v. p. 107, 1891 (Georgetown); Sharpe, Cat. B. Brit. Mus. xxiv. p. 468, 1896 (Carimang River); Quelch, Timehri (2) x. p. 278, 1896; Beebe, Our Search for a Wilderness, p. 156, 1910 (Waini River).

"Common Spotted Sand-Lark or Wagtail," "Sandpiper or 'Nit'" (Quelch).

Adult male. Upper surface olive-brown, with dark shaft-streaks and dark edgings to the wing-coverts; outer marginal upper wing-coverts and bastard-wing blackish edged with white; primary-coverts and quills dark brown, the latter white towards the base on the inner web, except the outer one, basal portion and tips of secondaries white; outer tail-feathers more or less marked with white; a line over the eye white; throat and entire under surface white including the axillaries; sides of neck olive-brown; under wing-coverts brown tipped with white.

Total length 160 mm., culmen 26, wing 101, tail 41, tarsus 25.

Adult female. Similar to the adult male. Wing 103 mm.

The male described is in winter plumage, and was obtained on the Mazaruni River.

Adult male in summer plumage differs in having the under surface spotted with brown and the dark shaft-lines on the upper parts wider and much more pronounced; some of the feathers are narrowly barred with dark brown. "Bill greenish olive above, yellow beneath, the point of both mandibles black; feet pale yellowish flesh-colour, claws black; iris hazel."

This bird breeds in North America and migrates south in winter.

Range in British Guiana. Ituribisi River, Abary River, Mazaruni River (*McConnell collection*); Bartica, Kamakusa, Kamarang River (*Whitely*); Waini River (*Beebe*).

Extralimital Range. Distributed generally in South America to South-east Brazil, Central America, West India Islands, and North America.

Habits. Mr. J. J. Quelch (Timehri (2) ii. p. 363) observed this species on the Abary River, and writes:—"Along the waterside,

where the grassy reaches occur, the Small Sandpiper or Wagtail (*Tringoides macularius*) ran backwards as though undecided what was best to do."

Mr. J. J. Quelch also gives the following note (Timehri (2) x. p. 278):—"The Common Spotted Sand-Lark, Sandpiper, or 'Nit' (*Tringoides macularius*), which will be met with by the waterside throughout almost the whole colony, more especially on the mud-flats and sand-banks. They are migrants from the North, whither they resort for the breeding-season, but many remain throughout the year with us."

Genus **BARTRAMIA** Less.

Bartramia Lesson, Traité d'Orn. p. 553, 1831. Type *B. longicauda* (Bechst.).

This genus is distinguished by having a graduated tail and the culmen about equal to the middle toe and claw in length.

78. *Bartramia longicauda*.

BARTRAM'S SANDPIPER.

Bartramia longicauda (Bechst.), Kurze Uebers. Latham, p. 453, pl. 184, 1811 (North America); Quelch, Timehri (2) x. p. 272, 1896 (migration); Sharpe, Cat. B. Brit. Mus. xxiv. p. 509, 1896; Brabourne & Chubb, B. S. Amer. i. p. 42, no. 402, 1912.

"Grey Plover," "Grass or Field Plover," Prairie Pigeon" (Quelch).

Adult female. General colour above black or greyish brown, with buff and grey markings to the feathers, more uniform on the lower back and rump, and rufescent buff on the hind-neck; bastard-wing, primary-coverts, and quills dark brown, the shaft of outer primary white; inner webs of quills mottled or barred with white; inner primary and secondary quills paler, edged and barred with white; middle tail-feathers greyish brown marked with black, the outer feathers buff marked with black and white; the feathers on the middle of the crown broadly edged with buff; throat white; sides of face, fore-neck, and breast buff with dark shaft-lines to the feathers, which are formed into bars with spear-shaped markings on the latter; flanks, axillaries, and under wing-coverts barred with brown and white; abdomen creamy-white, becoming pale buff on the vent and under tail-coverts.

Total length 305 mm., culmen 31, wing 162, tail 79, tarsus 47, middle toe and claw 32.

Adult male. Similar to the adult female. Wing 159 mm.

This species is not represented in the McConnell collection, and the bird described was collected by T. K. Salmon at Medellin, Province Antioquia, Colombia and is now in the British Museum, Salvin-Godman collection.

Breeds in the high north and migrates south in winter.

Range in British Guiana. "Interior Highlands" (Quelch).

Extralimital Range. South America generally to Argentina and Chile, Central and North America, accidental in Europe.

Habits. Mr. J. J. Quelch (Timehri (2) x. p. 272) observed this species and remarks:—"Bartram's Sandpiper (*Bartramia longicauda*), which is known under a variety of common names in the different localities which it frequents, such as Grey Plover, Grass or Field Plover, and even Prairie-Pigeon. The species occurs exceptionally as a wanderer to the British Isles and on the continent of Europe, where authenticated specimens have been killed. Here in the Colony, it is a common migrant with the other forms, though many more seem to frequent the interior highlands than in the other cases, and remain as stragglers throughout the winter months. It is known to breed as far north as the Arctic Circle, and to range southward in its migration as far as Buenos Ayres."

Genus **EREUNETES** Illig.

Ereunetes Illiger, Prodr. Syst. Mamm. et Av. p. 262, 1811. Type *E. petrificatus* Illig.

This genus is characterised by having the tarsus about equal to the culmen in length, the bare portion of the tibia nearly equal to the length of the tarsus, bill widened at the end and depressed.

79. *Ereunetes pusillus*.

SEMIPALMATED SANDPIPER.

Ereunetes pusillus (Linn.), Syst. Nat. i. p. 252, 1766 ("Habitat in Domingo"); Salvin, Ibis, 1886, p. 179; Sharpe, Cat. B. Brit. Mus. xxiv. p. 514, 1896; Quelch, Timehri (2) x. p. 279, 1896

(migration); Brabourne & Chubb, B. S. Amer. i. p. 42, no. 403, 1912.

Ereunetes semipalmatus (Wils.), Cab. in Schomb. Reis. Guian. iii. p. 758, 1848.

“Little Peep or Wilson’s Sandpiper” (*Quelch*).

Adult female. General colour above dark brown with rufescent or whitish edges to the feathers; median and greater upper wing-coverts somewhat paler than the back, the latter tipped with white; middle of rump and median upper tail-coverts black; sides of rump and lateral upper tail-coverts white; tail pale brown, rather darker on the two central feathers; bastard-wing, primary-coverts, and primary-quills blackish; secondaries more or less white at the base; loreal streak and eyebrow white; a faint dark line from the bill to the eye; throat and entire under surface white; axillaries pale grey; under wing-coverts white freckled with black on the marginal portion. Bill black, becoming greenish olive on the basal part of the mandible; feet greenish olive; iris dark brown.”

Total length 150 mm., culmen 24, wing 100, tail 41, tarsus 23.

Adult male. Similar to the adult female. Wing 93 mm.

The description of the female is taken from an example collected on the Abary River in November 1906.

This species breeds in Arctic America and migrates to South America in winter.

Range in British Guiana. Ituribisi River, Essequibo River, Abary River (*McConnell collection*).

Extralimital Range. Peru and South-east Brazil, Central America, West India Islands, and North America.

Habits. Schomburgk says (Reis. Guian. iii. p. 758) that this bird is found in large flocks on the sand-banks of the coast, like *T. canutus* = *Canutus rufus*, p. 131.

Mr. J. J. Quelch mentions this species as a migrant to British Guiana.

Genus **CALIDRIS** Illig.

Calidris Illiger, Prodr. Syst. Mamm. et Av. p. 249, 1811. Type *C. leucophæa* (Vroeg).

This genus is characterised by having no hind-toe, and the bill about equal in length to that of the tarsus.



Fig. 36.—To show the absence of hind-toe.

80. *Calidris leucophæa*.

SANDERLING.

Calidris leucophæa (Vroeg), Catal. p. 32, 1764 (North Coast of Holland); Brabourne & Chubb, B. S. Amer. i. p. 42, no. 406, 1912.

Calidris arenaria (Linn., 1766), Cab. in Schomb. Reis. Guian. iii. p. 759, 1848; Salvin, Ibis, 1886, p. 179; Sharpe, Cat. B. Brit. Mus. xxiv. p. 526, 1896; Quelch, Timehri (2) x. p. 277, 1896.

Adult male. Crown of head and nape, back, scapulars, upper wing-coverts, long inner secondaries, and upper tail-coverts blackish spotted or edged with white; some of the lesser upper wing-coverts, bastard-wing, primary-coverts, and quills blackish with white on the inner webs of the last; tail white, pale brown towards the tips of the feathers; forehead, sides of face, and entire under surface pure white. "Bill and feet olive-black; iris dark brown."

Total length 170 mm., culmen 26, wing 127, tail 51, tarsus 24.

Adult female. Similar to the adult male. Wing 125 mm.

This bird breeds in the high northern latitudes and winters only in the Southern Hemisphere.

Range in British Guiana. Although there are two examples of this bird in the McConnell collection, which were obtained in the Colony, there is no exact locality given to either.

Habits. Schomburgk states (Reis. Guian. iii. p. 758) that this bird is found commonly on the sand-banks of the Waini River.

We quote the following note from Mr. J. J. Quelch (Timehri (2) x. p. 277):—"The common Sanderling (*Calidris arenaria*).

This species, like the Turnstone, is remarkable for its great range. It is known to breed throughout almost the whole Arctic district, migrating to S. Africa, Asia, and some of the Pacific Islands in the Old World, and to Chili and Buenos Ayres in the New. The Sanderling does not appear to be a common bird here, as it is but rarely met with."

Genus **HETEROPYGIA** Coues.

Heteropygia Coues, Proc. Acad. Nat. Sci. Philad. 1861, p. 190. Type *H. fuscicollis* (Vieill.).

In this genus a hind-toe is present and the tarsus is longer than the middle toe and claw.

Key to the Species.

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|--|---------------------------------|
| A. Larger, wing more than 130 mm.; central upper tail-coverts black | <i>H. pectoralis</i> , p. 129. |
| B. Smaller, wing less than 130 mm.; central upper tail-coverts white | <i>H. fuscicollis</i> , p. 130. |

81. ***Heteropygia pectoralis*.**

PECTORAL SANDPIPER.

Heteropygia pectoralis Say in James's Acc. Long's Exped. Rocky Mts. vol. i. p. 171, footnote, 1823 (Engineer Cantonment, U.S.A.); Vieill. N. Diet. d'Hist. Nat. xxxiv. p. 465, 1819 ("Iles Antilles et dans les parties méridionales des Etats-Unis").

Heteropygia maculata Sharpe, Cat. B. Brit. Mus. xxiv. p. 562, 1896; Brabourne & Chubb, B. S. Amer. i. p. 42, no. 408, 1912.

Adult male. General colour above black, with rufescent or white edges to the feathers; lower back, rump, and central upper tail-coverts uniform black; outer tail-feathers pale brown with a subapical black bar and white tip; sides of forehead, throat, abdomen, axillaries, and under tail-coverts white; under wing-coverts brown at base and tipped with white; fore-neck, sides of neck, and breast isabelline grey with dark brown shaft-lines becoming darker and almost uniform dark brown on the sides of the breast.

Total length 200 mm., culmen 29, wings 141, tail 57, tarsus 27.

The bird described was collected on the Ituribisi River.

Adult female. Similar to the adult male, but smaller. Wing 130 mm.

We have measured four males and find the wings to vary from

135 to 142 mm., and in the same number of females the wings vary from 125–131 mm.

This species, which breeds in the high north, winters in British Guiana.

Range in British Guiana. Ituribisi River, Kamakabra River, Essequibo River, Abary River (*McConnell collection*).

Extralimital Range. South America generally to Patagonia, Central America, West India Islands, and North America.

Habits. Unrecorded in British Guiana.

82. *Heteropygia fuscicollis*.

BONAPARTE'S SANDPIPER.

Heteropygia fuscicollis (Vieill.), N. Diet. d'Hist. Nat. xxxiv. p. 461, 1819 (Paraguay); Sharpe, Cat. B. Brit. Mus. xxiv. p. 574, 1896; Brabourne & Chubb, B. S. Amer. i. p. 42, no. 410, 1912.

Adult. Head, hind-neck, and upper back brownish grey with dark centres to the feathers; some of the scapulars are black with rufescent edges on the inner side and white on the outer margin; upper wing-coverts and long innermost secondaries dark brown with pale grey edges, the outer greater coverts tipped with white; bastard-wing, primary-coverts, and quills dark brown like the central tail-feathers; lateral upper tail-coverts white, like the sides of the rump; rump and central upper tail-coverts black with narrow whitish edges; throat and under surface, fore-neck and sides of body grey with dark centres to the feathers. "Bill and feet dusky; iris brown."

Total length 159 mm., culmen 25, wing 116, tail 50, tarsus 23.

The specimen described was collected on the Abary River in September 1907.

Adult male and female similar both in colour of plumage and measurements.

This bird also breeds in the high north and is a winter visitor to British Guiana.

Range in British Guiana. Kamakabra River, Abary River (*McConnell collection*).

Extralimital Range. The remaining portion of South America and the Falkland Islands, Central America, West India Islands, and North America.

Habits. Unrecorded in British Guiana.

Genus **CANUTUS** Brehm.

Canutus Brehm, Vög. Deutschl. p. 653, 1831. Type *C. canutus* (Linn.).

This genus is distinguished by having the bill slightly longer than the tarsus and the tail square.

83. **Canutus rufus.**

THE AMERICAN KNOT.

Tringa rufa Wilson, Amer. Orn. vii. p. 43, pl. lvii. fig. 5, 1813 (we designate New Jersey as the type locality).

Canutus canutus (nec Linn.), Brabourne & Chubb, B. S. Amer. i. p. 43, no. 412, 1912.

Tringa canutus (nec Linn.), Cab. in Schomb. Reis. Guian. iii. p. 758, 1848; Salvin, Ibis, 1886, p. 179; Sharpe, Cat. B. Brit. Mus. xxiv. p. 593, 1896; Quelch, Timehri (2) x. p. 278, 1896.

“The Knot or Red-breasted Sandpiper” (*Quelch*).

Adult male. General colour above, including the head, back, wings, and tail dark grey, with dark shaft-streaks and a few black feathers on the back, scapulars, and long innermost secondaries; lower back, rump, and upper tail-coverts black, mottled and margined, or barred with white; bastard-wing and primary-coverts blackish brown; primary-quills also blackish, paler and inclining to white on the inner webs towards the base, some of the inner quills narrowly edged with white on the outer webs; chin and sides of face white; fore-neck greyish white with dark shaft-lines; remainder of the under surface irregularly coloured with rufous and greyish white; under wing-coverts, axillaries, and sides of body, flanks, and under tail-coverts white irregularly marked with pale brown. “Bill and feet black; iris dark hazel.”

Total length 240 mm., culmen 36, wing 166, tail 63, tarsus 31.

Adult female. Similar to the adult male. Wing 168 mm.

The male described was moulting from the summer to the winter plumage.

The summer plumage of the American Knot is black above, suffused with rufous, and the under surface almost uniform rufous, while the bird in winter dress has the upper surface grey and the under parts white with grey markings on the fore-neck and sides of the body.

This species is a winter visitor only to British Guiana.

Range in British Guiana. The only specimen in the McConnell

collection was procured in the Colony, but the exact locality is not known.

Extralimital Range. North, Central, and South America.

Habits. According to Schomburgk (Reis. Guian. iii. p. 758) this bird is found in large flocks on the sand- and mussel-banks of the coast.

Mr. J. J. Quelch (Timehri (2) x. p. 278) remarks :—"The Knot or Red-breasted Sandpiper (*Tringa canutus*). As will be gathered from the description, these birds are of very variable plumage, according to the season. In the Colony they are of rare occurrence. They are much more common in the Old World, where they are known to migrate as far south as Australia and New Zealand. They are known to breed in the extreme Arctic regions."

Genus **GALLINAGO** Koch.

Gallinago Koch, Syst. baer. Vogel, pp. xlii, 312, 1816. Type *G. gallinago*.

This genus differs in having the eyes placed further back on the sides of the head, a long bill, short tarsus, and long toes.

Key to the Species.

- A. Larger, wing more than 120 mm.; under tail-coverts buff barred with pale brown . *G. delicata*, p. 132.
- B. Smaller, wing less than 120 mm.; under tail-coverts white with pale brown bars ... *G. braziliensis*, p. 133.

84. *Gallinago delicata*.

WILSON'S SNIPE.

Gallinago delicata (Ord), Reprint of Wilson's Amer. Orn. ix. p. cexviii, 1825 (Pennsylvania); Sharpe, Cat. B. Brit. Mus. xxiv. p. 642, 1896; Brabourne & Chubb, B. S. Amer. i. p. 43, no. 413, 1912.

Adult. General colour above black with rufescent, greyish white, or pale brown markings to the feathers, which vary in shape, some being spots, streaks, bars, or edgings; bastard-wing and primary-coverts blackish, the latter tipped with white, as also the marginal upper wing-coverts; primary-quills dark brown, the outer web of first primary white, secondaries margined with white at the tips; median upper wing-coverts barred with greyish brown; innermost secondaries black with mottled-brown bars; middle of back uniform black; the middle tail-feathers black broadly banded with chestnut and tipped with white, the outer

ones grey mottled and barred with black and tipped with white ; median line on the head, hind-neck, and sides of neck rufescent ; lores, sides of face, and chin buffy-white with blackish dots ; fore-neck sandy buff with dark shaft-lines ; abdomen and sides of body white barred with dark brown ; under tail-coverts buff with dark brown bars ; axillaries and under wing-coverts black barred with white, the greater series grey fringed with white.

Total length 245 mm., culmen 70, wing 125, tail 50, tarsus 35.

Adult male and female similar in coloration and measurements.

The bird described was obtained on the Supenaam River in 1910, and is the first recorded in the Colony.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Supenaam River (McConnell collection).

Extralimital Range. Venezuela, Colombia, and Brazil, Central America, West India Islands, and North America.

Habits. Unrecorded in British Guiana.

85. *Gallinago braziliensis*.

BRAZILIAN SNIPE.

Gallinago braziliensis Swains. Faun. Boreal. p. 400, note, 1831 (Equinoctial Brazil) ; Brabourne & Chubb, B. S. Amer. i. p. 43, no. 414, 1912.

Scolopax frenata (Illig.), Cab. in Schomb. Reis. Guian. iii. p. 758, 1848.

Gallinago frenata Salvin, Ibis, 1886, p. 179 (Bartica Grove, Merumé Mountains, Roraima, 3500 ft.) ; Sharpe, Cat. B. Brit. Mus. xxiv. p. 646, 1896 (Aunai).

Adult. Upper surface black varied by pale grey, brown, or white markings ; lesser upper wing-coverts, bastard-wing, and primary-coverts black tipped with white, the greater coverts similar, but some of the inner ones show a pale subapical bar ; quills blackish, outer web of first primary white, secondaries edged with white at the tips, innermost secondaries barred or marbled with brown ; outer tail-feathers white barred with dark brown, the middle ones black banded with chestnut and tipped with white ; median line on the head, nape, and sides of face buff with dark centres to the feathers somewhat paler on the last ; a well-pronounced dark loreal streak ; throat and abdomen white ; fore-neck and breast pale brown with dull white margins to the

feathers; under wing-coverts, axillaries, sides of body, and under tail-coverts white barred with brown.

Total length 228 mm., culmen 62, wing 116, tail 45, tarsus 29.

The bird from which the description is taken was collected on the Bonasika River in 1911.

The adult male and female are similar in coloration and measurement of wing, but the length of the culmen appears to be greater in the female.

Breeding-season. Unrecorded in British Guiana.

Nest. "It builds its nest on a small hillock in the swamps" (*Schomburgk*).

Eggs. "Lays two eggs" (*Schomburgk*).

Range in British Guiana. Upper Takutu Mountains, Supenaam River, Bartica, Bonasika River, Abary River, Anarica River, Great Savannas (*McConnell collection*); Mount Roraima, 3500 ft., Merumé Mountains, Annai (*Whitely*).

Extra-limital Range. South America generally to Argentina and Chile.

Habits. According to Schomburgk (*Reis. Guian.* iii. p. 758) the habits and distribution of this bird are the same as those of *Homoptilura undulata*.

Genus **HOMOPTILURA** Gray.

Homoptilura Gray, List Gen. B. 1840, p. 70. Type *H. undulata* (Bodd.).

This genus differs chiefly in the long bill, which resembles that of a Woodcock and is rather more than twice the length of the tail; the tail slightly exceeds the tarsus in length, and the wing exceeds the length of the tail by a little more than two-thirds.

86. *Homoptilura undulata*.

CAYENNE SNIPE.

Gallinago undulata (Bodd.), Tabl. Pl. Enl. p. 54, 1783 (Cayenne); Salvin, Ibis, 1886, p. 179 (Merumé Mts., Roraima, 3500 ft.); Sharpe, Cat. B. Brit. Mus. xxiv. p. 659, 1896; Brabourne & Chubb, B. S. Amer. i. p. 43, no. 419, 1912.

Scelopax paludosa Cab. in Schomb. Reis. Guian. iii. p. 758, 1848.

Adult. Upper surface black or dark brown varied with dull white or sandy buff which takes the form of bars, spots, or



Homophila undulata.
Tigrine Snipe.

edgings to the feathers; primary and secondary quills brown mottled with white; middle and sides of crown buff; a black line from the base of the bill to the eye; sides of the face buffy-white more or less intermixed with dark brown; throat uniform buffy-white; entire under surface white, the feathers barred or edged with brown; under tail-coverts sandy buff with dark brown bars.

Total length 330 mm., culmen 108, wing 155, tail 50, tarsus 48.

The adult male and female are alike in colour of plumage and very similar in wing-measurement, but the length of the culmen appears to be longer in the female.

This species is easily distinguished from the other Snipes in the Colony by its large size.

The bird described was obtained on the Ituribisi River in October 1908.

Breeding season. Unrecorded in British Guiana.

Nest. "Built on a small hillock in the swamps" (*Schomburgk*).

Eggs. "Lays two eggs" (*Schomburgk*).

Range in British Guiana. Ituribisi River (*McConnell collection*); Merumé Mountains, Mount Roraima, 3500 ft. (*Whitely*).

Extralimital Range. Cayenne.

Habits. Schomburgk writes (*Reis. Guian.* iii. p. 758):—"This Snipe is found solitary on the swampy grazing grounds near the coast and in the swampy parts of the Savannas. It builds its nest on a small hillock in the swamps and lays two eggs."

Family JACANIDÆ.

The birds which constitute this family are very Rail-like in appearance, with long toes and spur-like claws. They are found over the greater part of the known world, being distributed in Africa, Asia, and Australia, Central and South America. One genus and three species occur in South America, one species being represented in British Guiana.

Genus JACANA Briss.

Jacana Brissou, *Orn.* v. p. 121, 1760. Type *J. jacana* (Linn.).

This genus is distinguished by the frontal leaf-like lappet and a pendent lappet at the angle of the gale, the spur on the wing, and the very long toes and claws.

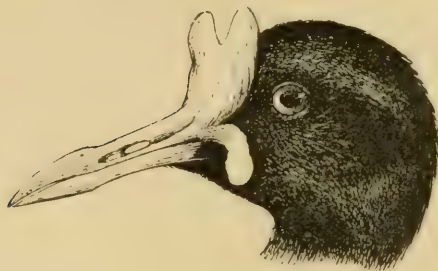


Fig. 37.—To show the facial lappets.



Fig. 38.—To illustrate the long toes and hind-claw.

87. *Jacana spinosa*.

COMMON JACANA.

Jacana spinosa (Linn.), Syst. Nat. i. p. 152, 1758 ("Habitat in America australi"); Brabourne & Chubb, B. S. Amer. i. p. 44, no. 427, 1912.

Parra jassana Cab. in Schomb. Reis. Guian. iii. p. 759, 1848.

Parra jacana (Linn. 1766), Brown, Canoe and Camp Life, p. 107, 1876 (Rupununi River); Salvin, Ibis, 1886, p. 177; Quelch, Timehri (2) ii. p. 363, 1888 (Abary River); id. op. cit. (2) v. p. 107, 1891 (Georgetown); Lloyd Price, t. c. p. 67.

Jacana jacana Sharpe, Cat. B. Brit. Mus. xxiv. p. 82, 1896 (Carimang River, Quonga); Beebe, Our Search for a Wilderness, pp. 378, 384 (Abary River), p. 129 (Georgetown), 1910.

"Spurwing" (*Brown*).

Adult male. Back, wings, innermost secondaries, tail, sides of the

body, axillaries, and under wing-coverts chestnut; head, neck, under surface, tips of tail-feathers, and outer margin of wing above and below black; primary-quills and outer secondaries lemon-yellow edged with dark brown.

Total length 230 mm., culmen (from base of frontal shield) 30, wing 140, tail 46, tarsus 61, middle toe and claw 77.

Adult female. Similar to the adult male in coloration, but smaller in wing-measurement, 133 mm.

The description of the male is taken from an example obtained on the Abary River in September 1907.

The young is distinguished by its bronze-brown upper surface, including the head, back, wings, and tail. The under surface and a line above and behind the eye buffy-white.

Breeding-season. Unrecorded in British Guiana.

Nest. "A thick mass of water-weed" (*Lloyd Price*).

Eggs. "The eggs are found, usually on a thick mass of water-weed, usually four in number, and of olive-brown, spotted and streaked with black" (*Lloyd Price*).

Range in British Guiana. Upper Takutu Mountains, Supenaam River, Abary River (*McConnell collection*); Rupununi River (*Brown*); Georgetown, Abary River (*Bebe*).

Extralimital Range. South America to the Argentine.

Habits. Regarding the habits of this bird Schomburgk (*Reis. Guian. iii. p. 759*) writes:—"Is one of the most common marsh birds in British Guiana, being most plentiful on the coast region. Its favourite haunts are the small ditches running from the plantations, bogs, and lakes near the coast; here it runs about upon the leaves of water-plants, preying on insects and their larvæ. As soon as one of a flock discovers a suspicious-looking object it raises its head, calls out loudly; the rest immediately join, and one by one disappear until the whole flock has flown away. They do not fly far, however, without settling again. When doing this they display the beautiful colours of their plumage. The nest is built in a dry hollow near the edge of a marsh or ditch, and the bird lays from three to four eggs. The 'Warraus' call it *Nassitung* and the 'Macusis' *Zeckeh-zeckeh*."

Mr. J. J. Quelch (*Timehri* (2) ii. p. 363) observed this species, which he calls the Lovely Spur-wing (*Parra jacana*), on the Abary River, and remarks that it ran backwards and forwards as though undecided what was best to do.

Mr. J. J. Quelch (Timehri (2) v. p. 107) observed this species, the Long-legged and Long-toed Spur-wing, at Georgetown.

Mr. Lloyd Price (Timehri (2) v. p. 67) writes :—"In the canals and trenches, and almost in the water itself, the eggs of the Spur-wing (*Parra jacana*) are found, usually on a thick mass of water-weed; the eggs are generally four in number, and of an olive-brown, spotted and streaked with black."

Mr. Beebe (Our Search for a Wilderness, p. 354) writes :—"Spur-winged Jacanas in loud cackling pairs were everywhere, showing conspicuously against the green reeds, dark chocolate when at rest and flashing pale yellow in flight."

Id. (t. c., p. 378) :—"Among the smaller marsh-birds, Jacanas easily held first place, both in numbers and in action and voice, day and night. About every half-hour through the day a group of these birds would set up a wild and frantic clucking, sounding as if a dozen hens were being pursued and had about given up all hope of escape. This was usually caused by the appearance of a crocodile, large or small, from beneath the lily pads. All the Jacanas within sight would gather at once and dance excitedly about on the surrounding pads, until the pestered reptile sank again into the muddy waters."

Id. (t. c. p. 384) (Abary River) :—"A Jacana was leading her brood of three small chicks within a few feet of my hammock, down to a causeway of trembling lily pads. The youngsters were very tiny, clad in grey with a large black mark on the nape. Even in comparison with their mother their toes were of enormous length. They kept at her very heels and when she stopped for a moment crept beneath her wings."

Family BURHINIDÆ.

These birds hold a somewhat intermediate position between the Bustards and Plovers. They are distributed in Europe, Africa, Asia, and Australia, San Domingo, Central and South America. Two species are known in South America, one of which occurs in British Guiana.

Genus *ÆDICNEMUS* Temm.

Ædicnemus Temminck, Man. d'Orn. 1815, p. 321. Type *Æ. ædicnemus* (Linn.).

The members of this genus have rather long legs, short toes,

conspicuously large eyes. The bill slightly exceeds the length of the middle toe and claw.

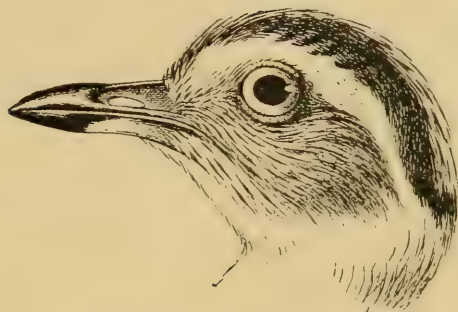


Fig. 39.—To show the size of the eye.

88. *Ædicnemus bistriatus*.

DOUBLE-STRIPED THICK-KNEE.

Burhinus bistriatus (Wagl.), Isis, 1829, p. 644 (Mexico); Brabourne & Chubb, B. S. Amer. i. p. 45, no. 431, 1912.

Ædicnemus bistriatus Cab. in Schomb. Reis. Guian. iii. p. 749, 1848; Salvin, Ibis, 1886, p. 177; Sharpe, Cat. B. Brit. Mus. xxiv. p. 12, 1896 (Aunai).

Ædicnemus vocifer Brown, Canoe and Camp Life, p. 142, 1876 (Quonga).

“Stilt-legged Plover; Corobara” (*Brown*).

Adult male. General colour above black or dark brown, the feathers broadly edged with sandy rufous on the back and wings, more narrowly on the crown of the head; tail brown, some of the feathers barred with white; a broad band of white on each side of the crown; forehead, hind-neck, fore-neck, and sides of face sandy rufous with black shaft-streaks to the feathers; breast grey with dark shaft-lines to the feathers; throat, abdomen, and under wing-coverts white; under tail-coverts sandy rufous; primary and secondary quills brown with white on the inner webs, some of the inner primaries and outer secondaries have white on both webs.

Total length 400 mm., culmen 45, wing 229, tail 113, tarsus 111, middle toe and claw 39.

Adult female. Similar to the adult male. Wing 211 mm.

The male described was collected in the district of the Mountains of the Moon.

Young in partial down. General colour of the upper surface blackish brown with broad sandy-rufous margins to the feathers ; marginal upper wing-coverts black edged with rufous ; median and greater coverts grey with dark shaft-lines and broad rufous margins ; bastard-wing, primary-coverts, primary and secondary quills black ; lower back and rump covered with down, sandy rufous dotted with black ; upper tail-coverts rufous and grey ; tail-feathers grey showing indistinct dark bars, a subapical white band and black tip ; a white superciliary line which extends backwards and meets on the hind-neck, where it is fringed above and below with black ; a broad black band on the sides of the hinder crown ; ear-coverts and middle of throat rufous narrowly streaked with black, becoming more grey on the breast ; chin and sides of throat white, as also the abdomen and thighs ; under tail-coverts sandy rufous ; sides of body covered with whitish down.

The young bird from which this description is taken has no exact locality.

Breeding-season. Unrecorded in British Guiana.

Nest. "A small hollow in the ground among the grass" (*Schomburgk*).

Eggs. Undescribed from British Guiana.

Range in British Guiana. Aunai (*Whitely*) ; Quonga (*Brown*).

Extralimital Range. North Brazil, Venezuela, Colombia, Central America to Mexico.

Habits. According to Schomburgk (*Reis. Guian.* iii. p. 749) this bird is found in the grass on the Savannas singly and in pairs. It lives chiefly on the ground and can run very swiftly ; it flies only for a short distance and then repeats its running. Its food consists of insects, small lizards, frogs, etc. The nest is formed by a small hollow in the ground among the grass. The "Macusis" call it *Warate* and the "Arekunas" *Korrere*.

Mr. Barrington Brown (*Canoe and Camp Life*, p. 142) writes:—"A large Stilt-legged Plover, about the size of a large Curlew, called Corobara (*Ædicnemus vocifer*), which was quite tame, running about the houses. It made a most singular, chattering cry, both in the evening and just before daylight in the morning."

Order **GRUIFORMES.**

Family **ARAMIDÆ.**

This family consists of one genus and two species only. Its distribution is South Florida, Greater Antilles, Central and South America.

Genus **ARAMUS** Vieill.

Aramus Vieillot, Anal. nouv. Ornith. p. 58, 1816. Type *A. scolopaceus* (Gmel.).

The characters of this genus are based upon the Rail-like bill and the peculiar form of the first primary, but anatomically it is closely allied to the Cranes.



Fig. 40.—To illustrate the form of the bill.



Fig. 41.—To show the peculiar shape of the first primary.

89. **Aramus scolopaceus.**

SOUTHERN LIMPKIN.

Aramus scolopaceus (Gmel.), Syst. Nat. i. p. 647, 1789 (Cayenne);
 Quelch, Timehri (2) ii. p. 367, 1888 (Arary River); Sharpe, Cat.
 B. Brit. Mus. xxiii. p. 237, 1894; Brabourne & Chubb, B. S. Amer.
 i. p. 45, no. 432, 1912.

Nothrodinus scolopaceus Cab. in Schomb. Reis. Guian. iii. p. 759, 1848.

“Caraow” (*Quelch*).

Adult male. Blackish above and below; the feathers on the hind-neck and abdomen broadly marked with white.

Total length 590 mm., culmen 107, wing 315, tail 140, tarsus 117, middle toe and claw 106.

Adult female. Similar to the adult male. Wing 343 mm.

The bird from which the description is taken was collected on the Abary River, in July 1906.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Supenaam River, Bonasika River, Kamakabra River, Abary River (*McConnell collection*).

Extralimital Range. Venezuela, Brazil, Paraguay, Uruguay, Argentina.

Habits. According to Schomburgk (*Reis. Guian.* iii. p. 759), this bird is found near the coast and is common in the Avicennien bush and also in boggy places covered with high grass. Its nesting-habits were unknown to him.

Mr. J. J. Quelch (*Timehri* (2) ii. p. 377), when on Tiger Island, Abary River, remarks:—"A hunting-party was, however, sent out, which brought back four fine specimens of the Caraow (*Aramus scolopaceus*)."

Family EURYPYGIDÆ.

This family is composed of one genus and two species only which are distributed in Central and South America.

Genus EURYPYGA Illig.

Eurypyga Illiger, *Prodr. Syst. Mamm. et Av.* p. 257, 1811. Type *E. helias* (Pallas).

The characters which distinguish this genus are that the bill is Rail-like, with the nostrils horizontal and pervious; the lower mandible grooved laterally; inner secondaries nearly equal in length to the primaries; tibia bare for the greater portion of its length; tarsus slightly longer than the bill.

90. *Eurypyga helias*.

SUN BITTERN.

Eurypyga helias (Pall.), *Neue Nord. Beytr.* ii. p. 48, pl. iii. 1781 (Surinam); *Cab. in Schomb. Reis. Guian.* iii. p. 573, 1848; *Salvin, Ibis*, 1886, p. 177 (Bartica Grove, Camacusa); *W. L. Slater, Ibis*,

1887, p. 317 (Maccasseema); Sharpe, Cat. B. Brit. Mus. xxiii. p. 240, 1894 (Demerara); Brabourne & Chubb, B. S. Amer. i. p. 45, no. 433, 1912.

Adult male. Head black, with a white line above and below the eye, the latter wider and more extended towards the sides of the neck; hind-neck, mantle, fore-neck, and breast blackish brown, barred with rufous; back, wings, and tail black, the feathers crossed by mottled bands of grey; the quills and tail-feathers are crossed by two bands of deep chestnut, some of the wing-feathers are also intermixed with white and golden yellow; throat pure white; remainder of the under surface, including the axillaries and lesser under wing-coverts, buff intermixed with brown. "Upper mandible black, lower mandible yellow-ochre; feet and claws yellow-ochre; iris red" (*H. Whitely*).

Total length 410 mm., culmen 50, wing 225, tail 156, tarsus 54.

Adult female. Similar to the adult male. Wing 222 mm.

The male described is from the Anarica River.

Young in partial down. Similar to the adult, but differ from most young birds by gaining the adult plumage direct from the nestling down without passing through an intermediate stage. The red bands on the tail appear to increase in width as the bird advances in age, the rufous cross-bars on the upper surface disappear more or less, and the black portion of the feathers become more intense.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Supenaam River, Bartica, Bonasika River, Anarica River, Mazaruni River, Kurubung River (*McConnell collection*); Kamakusa, Bartica (*Whitely*); Maccasseema (*W. L. Slater*); Canuku Mountains (*Schomburgk*).

Extralimital Range. Surinam, Brazil, Venezuela, Peru, Bolivia.

Habits. Schomburgk remarks (*Reis. Guian.* iii. p. 752) that this beautiful and graceful bird is found on the coasts and in the depths of the woods. He found it in numbers at the Canuku Mountains. They are very fond of sunny glades in the woods, and prefer especially the river borders. Occasionally they are found in pairs, but as a rule occur singly. They are easily tamed. He knew nothing about its nidification. The "Warraus" call it *Tuanna*, and the "Macusis" *Marereh*.

Schomburgk also remarks (Reis. Guian. i. p. 440):—This species looked at us with its neck fully out-stretched but quickly flew away; it looked most beautiful in the sunshine, when it spread its wings and tail out like a turkey-cock. Its food consists of flies and insects only and is so agile that it seldom misses its prey; if it discovers a fly on a plant it will at once most carefully stalk it with its neck drawn in and when within reach dart its head out, and the fly is caught.

Family PSOPHIIDÆ.

This family is composed of one genus and six species, and is confined to the South-American continent. They are soft-plumaged birds, with rounded bodies, long legs, and small feet.

Genus PSOPHIA Linn.

Psophia Linné, Syst. Nat. 10th ed. i. p. 154, 1758. Type *P. crepitans* Linn.

This genus has no near ally, but can always be distinguished by its small head and bill, soft plumage, short toes, and long legs.

91. *Psophia crepitans*.

COMMON TRUMPETER.

Psophia crepitans, Linn. Syst. Nat. i. p. 154, 1758 ("Habitat in America meridionali"); Cab. in Schomb. Reis. Guian. iii. p. 751, 1848; Salvin, Ibis, 1886, p. 177 (Camacusa, River Atapuro); W. L. Slater, Ibis, 1887, p. 317 (Maccasseema); Sharpe, Cat. B. Brit. Mus. xxiii. p. 279, 1894 (Takutu River); Lloyd, Timehri (2) xi. p. 3, 1892 (nesting notes); Beebe, Our Search for a Wilderness, p. 255, 1910 (Matope), p. 330 (Aremu); Brabourne & Chubb, B. S. Amer. i. p. 46, no. 436, 1912.

"Warracaba" (*C. A. Lloyd*).

Adult male. Head, neck, mantle, wings, lower back, tail, and entire under surface deep black; the feathers on the head and neck are short and down-like, those on the fore-neck are narrowly banded with green and broadly tipped with metallic purple; the feathers on the back and some of the upper wing-coverts tipped with umber-brown; the inner greater wing-coverts and innermost

secondaries grey, the outer portion of the webs of the feathers disintegrated.

Total length 480 mm., culmen 37, wing 280, tail 120, tarsus 143.

The description is taken from an example obtained on the Mazaruni River.

Adult female. Similar to the adult male.

Young in down. Upper surface rufous, mixed with blackish grey on the head and back, paler and more buff on the wings; a black patch on the throat and fore-neck; abdomen pale buff.

Breeding-season. Unrecorded in British Guiana.

Nest. "A hole in the fork of a tree at the height of about 20 feet from the ground" (*C. A. Lloyd*). "The nest is made on the ground" (*Schomburgk*).

Eggs. "Seven in number, dirty white in colour, a trifle smaller than those of the common fowl" (*C. A. Lloyd*).

Range in British Guiana. Ituribisi River, Supenaam River, Bartica, Kamakabra River, Bonasika River, Mazaruni River (*McConnell collection*); Kamakusa, Kamarang River, Takutu River (*Whitely*); Maccasseema (*W. L. Selater*); Matope and Aremu (*Beebe*).

Extralimital Range. North Brazil and Venezuela.

Habits. According to Schomburgk (*Reis. Guiana*, iii. p. 751) the Trumpeter is found in the woods all over British Guiana, occurring singly or in flocks up to two hundred. It never seems to leave the woods. It is very easily tamed, and is found in all the native villages, where they make themselves "cocks of the roost," and even master the tamed quadrupeds; even the large hokkos has to bow to its regime. Its power of flight is so weak, that when a number attempt to fly across a fairly wide river several fall in and reach the other side by swimming. It seems to prefer the damp low-lying woods near the coast to those of higher altitudes. The nest is made on the ground. The flesh is good. The "Macusis" call it *Yakamik* and the "Warraus" *Warracaba*.

Mr. C. A. Lloyd (*Timehri* (2) xi. p. 3) gives the following notes on the habits of this bird:—"For a long time we could gather no reliable information concerning the nesting-habits of the Warracaba (*Psophia crepitans*), some persons stating that all the females in a flock of these birds laid together in a common nest on the ground, others declaring that they nested in trees and that the eggs were blue. At last we had the pleasure of taking a nest in

the Savanna from a hole in the fork of a tree at the height of about 20 feet from the ground. It contained seven dirty white eggs, a trifle smaller than those of the common fowl, and as they were perfectly fresh, most likely the bird had not finished laying her full complement; a singular thing about the Warracaba is its dislike for young ducks, which it always destroys when it finds the opportunity. I am told that it is impossible to rear ducks where any of them are kept."

Mr. W. Beebe (*Our Search for a Wilderness*, p. 331) gives the following note:—"They run very swiftly, but seldom use their wings, and, although they swim quite well, rivers of any size are never crossed. They feed on the ground and roost in the tall trees. The voice has many variations, but the sound from which the name is derived is very loud and sonorous and can be heard at a great distance. When standing upright the Trumpeter reaches a height of from 18 to 20 inches."

Family IBIDIDÆ.

Members of this family are distributed in the temperate, sub-tropical, and tropical portions of the world. They are generally distinguished by their somewhat long and arched bills.

Genus **THERISTICUS** Wagl.

Theristicus Wagler, *Isis*, 1832, p. 1231. Type *T. melanopsis* Wagl.

This genus is characterized as having the head feathered; region of eye, chin, and upper throat bare, with some warty papillæ on the lores; anterior aspect of tarsus reticulated.

92. *Theristicus caudatus*.

GUIANA IBIS.

Theristicus caudatus (Bodd.), *Tabl. Pl. Enl.* p. 57, 1783 (Cayenne); Salvin, *Ibis*, 1886, p. 171; Sharpe, *Cat. B. Brit. Mus.* xxvi. pp. 23, 265, 1898 (Rupurumi River, Annai); Brabourne & Chubb, *B. S. Amer.* i. p. 47, no. 445, 1912.

Ibis albicollis Cab. in Schomb. *Reis. Guian.* iii. p. 757, 1848.

Adult male. Head and neck umber-brown, with white bases to the feathers; back, scapulars, and lesser upper wing-coverts olive-grey with pale edges to the feathers, paler and more ash-grey on the latter; rump and upper tail-coverts bottle-green; tail greenish

black, some of the feathers tipped or edged with brown ; greater upper wing-coverts and outer webs of the secondary quills white ; bastard-wing, primary-coverts, and quills blue-black, some of the latter brown at the tips, like the axillaries and under tail-coverts ; under wing-coverts bottle-green ; abdomen rusty brown, somewhat darker on the breast. "Iris red" (*H. Whitely*).

Total length 750 mm., culmen 150, wing 395, tail 200, tarsus 86.

Adult female. Similar to the adult male. Wing 383 mm.

The male described was collected on the Great Rupununi Savanna in December 1900 by Mr. J. J. Quelch.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Great Rupununi Savanna (*McConnell collection*) ; Annai (*Whitely*).

Habits. Schomburgk states (*Reis. Guian.* iii. p. 757) that this species lives in small numbers of from eight to ten scattered over the savannas. During their morning flight one hears their far-sounding call. They are occasionally found in large numbers on the sand-banks of rivers. Their favourite haunts appear to be the dried-up marshes and savannas. The nidification is unknown. It is called *Koateh* by the "Macusis."

Genus HARPIPRION Wagl.

Harpiprion Wagler, *Isis*, 1832, p. 1232. Type *H. cayennensis* (Gmel.).

The characters by which this genus is distinguished are a short nuchal crest of metallic feathers, chin and a line on each side of the throat bare, lores also bare but with no warty papillæ, and the anterior portion of the tarsus reticulated.

93. *Harpiprion cayennensis*.

(CAYENNE IBIS.

Harpiprion cayennensis (Gmel.), *Syst. Nat.* i. p. 652, 1789 ("Habitat in Cayenna"); Salvin, *Ibis*, 1886, p. 172 (Bartica Grove, Camacusa); Quelch, *Timehri* (2) ii. p. 373, 1888 (Abary River), iv. p. 334, 1890 (Berbice River), v. p. 107, 1891 (Georgetown); Sharpe, *Cat. B. Brit. Mus.* xxvi. pp. 25, 265, 1898; Brabourne & Chubb, *B. S. Amer.* i. p. 47, no. 448, 1912.

Ibis cayennensis Cab. in Schomb. *Reis. Guian.* iii. p. 757, 1848.

Ibis infusca (nec Licht.), Cab. in Schomb. *Reis. Guian.* iii. p. 756, 1848; Brown, *Canoe and Camp Life*, p. 21, 1876 (Cuyuni River).

Phimosus infuscatus (nec Licht.), Salvin, Ibis, 1886, p. 171; Beebe, Our Search for a Wilderness, p. 253, 1910 (Cuyuni River).

"Curi-curi or River-Ibis" (*Brown*) ; "Bush Curi-Curi, Bush or Bronze Ibis" (*Quelch*).

Adult male. General colour above and below oil-green with coppery reflections on the back and steel-blue on the quills and tail both above and below ; under surface not so bright and mixed with dull black ; top of head, sides of face, and throat dusky grey, somewhat darker on the throat ; nape and hind-neck bright green. "Bill and feet light green" (*Brown*).

Total length 500 mm., culmen 103, wing 279, tail 141, tarsus 58.

Adult female. Similar to the adult male. Wing 315 mm.

The description is based on an example obtained on the Abary River in September 1906.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Ituribisi River, Curubung River, Bartica, Abary River, Mazaruni River, Arwye Creek (*McConnell* collection) ; Bartica, Kamakusa (*Whitely*) ; Cuyuni River (*Brown & Beebe*) ; Berbice River, Georgetown (*Quelch*).

Extralimital Range. Brazil, Colombia, Ecuador, Peru.

Habits. Schomburgk remarks (Reis. Guian. ii. p. 503) :—This species is fairly common and found mostly in pairs, and is not of a very shy nature. It seeks its food, which consists of water-insects etc., on the edges of rivers. Towards dusk they fly away to roost in the woods. (*Cfr.* vol. iii. p. 756.) This species lives as the preceding species (*Ibis rubra*), singly or in pairs, on the Savanna swamps and on the borders of the rivers. I have found it at an altitude of 1500 ft., but I was unable to discover its nest. The "Warraus" call it *Korro-korro*.

Mr. Barrington Brown (Canoe and Camp Life, p. 21) gives the following note :—"The Curi-Curi or River Ibis (*Ibis infuscata*) gets its name of Curi-curi from its cry, which resembles that word repeated a few times ; they are of a dull olive-green colour, with light green bills and legs. They drill holes in the mud-banks with their long bills for worms, feeding after the manner of Snipe."

Mr. J. J. Quelch met with this species on the Abary River, and remarks that it rose at intervals from the bushes. He also observed it on the Berbice River and at Georgetown.

Genus **CERCIBIS** Wagl.

Cercibis Wagler, Isis, 1832, p. 1232. Type *C. oxycercus* (Spix).

Head moderately crested ; tail long, more than half the length of the wing ; lores, region of eye, and throat bare ; anterior portion of tarsus transversely scaled.

94. **Cercibis oxycercus.**

SHARP-TAILED IBIS.

Cercibis oxycercus (Spix), Av. Bras. ii. p. 69, pl. lxxxvii., 1825 ("in provincia Pará") ; Salvin, Ibis, 1886, p. 171 ; Sharpe, Cat. B. Brit. Mus. xxvi. p. 28, 1898 (Rupuruni River, Annai) ; Brabourne & Chubb, B. S. Amer. i. p. 48, no. 452, 1912.

Ibis oxycercus Cab. in Schomb. Reis. Guian. iii. p. 756, 1848.

Adult male. General colour above bluish black with purple reflections more strongly pronounced on the hind-neck ; forehead and sides of the face whitish brown ; entire under surface dull black with rust-brown margins to some of the feathers.

Total length 825 mm., culmen 162, wing 410, tail 265, tarsus 78.

Adult female. Similar to the adult male. Wing 403 mm.

The birds from which the descriptions are taken were collected on the Great Savanna, Rupuruni River, October 17, 1960, by Mr. J. J. Quelch.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Rupuruni River (*McConnell collection*) ; Annai (*Whitely*).

Extralimital Range. North Brazil, Colombia.

Habits. Schomburgk remarks (Reis. Guian. iii. p. 757) :—This species is found in pairs, and I have only observed it in the vicinity of Tenette on the Tukutu River. (*C/r.* vol. ii. p. 48.) Every morning we heard the piercing cry of this bird, which is like *tah-rong*. The colour of the cere and ring round the eye is orange-red.

Genus **EUDOCIMUS** Wagl.

Eudocimus Wagler, Isis, 1832, p. 1232. Type *E. ruber* (Linn.).

In this genus the anterior portion of tarsus is scaled, or plated, transversely; the forehead, sides of face, and throat bare.

95. *Eudocimus rubra*.

SCARLET IBIS.

Eudocimus rubra (Linn.), Syst. Nat. i. p. 145, 1758 ("Habitat in America" = Guiana); Salvin, Ibis, 1886, p. 171; W. L. Slater, Ibis, 1887, p. 317 (Maccasseema); Quelch, Timehri (2) v. p. 107, 1891 (Georgetown); Sharpe, Cat. B. Brit. Mus. xxvi. pp. 41, 267, 1898 (Berbice); Beebe, Our Search for a Wilderness, p. 153, 1910 (Mora passage); Brabourne & Chubb, B. S. Amer. i. p. 48, no. 456, 1912.

Ibis rubra Cab. in Schomb. Reis. Guian. iii. p. 756, 1848.

"Currie-Currie" (*C. A. Lloyd*).

Adult. Bright scarlet above and below, except the first two primaries, which are tipped with black, and the shafts of the feathers, which are white.

Total length 530 mm., culmen 130, wing 247, tail 91, tarsus 73.

Young. Head, neck, wings, and tail brown; lower back, rump, and upper tail-coverts white like the breast, abdomen, axillaries, under wing-coverts, and inner webs of the quills; under tail-coverts pale brown towards the tips.

The descriptions are taken from individuals obtained on the Berbice River.

The adult males and females are alike in colour of plumage, but there are great differences in the measurements. Thus in two males, which appear to be adult birds, the culmen measures 121 and 152 mm., the wing 244 and 267, and the tarsus 73 and 84; while three females have the culmen 127, 132, 135, the wing 240, 255, 267, and the tarsus 75, 79, 81.

Breeding-season. Unrecorded in British Guiana.

Nest. "Never builds a nest of any sort, but takes forcible possession of those of the Small White Egret (*Ardea candidissima* = *Leucophoyx thula*, p. 164) for depositing its eggs" (*C. A. Lloyd*).

Eggs. "Three in number and very variable both in shape and markings" (*C. A. Lloyd*).

Range in British Guiana. Berbice River (*McConnell collection*) ; Maccaseema (*W. L. Slater*) ; Mora passage (*Beebe*).

Extralimital Range. Eastern and Northern Brazil, Venezuela, and Margarita Island ; Greater Antilles ; occasional in Texas and Florida.

Habits. According to Schomburgk (*Reis. Guin.* iii. p. 756) the Scarlet Ibis is found all along the coast, more numerous at the mouths of the oceanic rivers, where they appear in countless numbers. It is well known that the young remain in the brown plumage for three years, during which time they are kept away from the birds in scarlet dress. At sunrise the flocks resort to their feeding-grounds, and when flying arrange themselves side by side—not as Geese and Cranes, behind each other. Lit up by the morning sun the numerous rows of these beautiful birds afford a most wonderful sight. Each detachment of birds has its separate area near the coast, and there on the low bushes they build their nests ; as a rule, several on each. They appear to use their nests for several years in succession. They carry the food for the young ones in the same manner as Pelicans, and have, like them, a pouch which is situated near the roof of the mouth, in which they collect the food. When the parent birds arrive at the nest, they open their mouths and the young help themselves. During the breeding-season they wage a continuous war against the Small Egret, driving them away and often take possession of their nests. The young birds are easily tamed. The “Macusis” call it *Yumarih* and the “Warraus” *Timuku*.

Mr. C. A. Lloyd (*Timehri* (2) xi. p. 9) remarks on this species :—“Mr. D. E. Mackintosh, who has paid much attention to the Coast birds of Surinam, asserts that the Scarlet Ibis or Currie-Currie, *Eudocimus ruber*, never builds a nest of any sort, but takes forcible possession of those of the small White Egret, *Ardea candidissima*, for the purpose of depositing its eggs. He states that he has often witnessed this Ibis in the act of tumbling the young Egrets out of their nests. . . . The eggs of the Scarlet Ibis are three in number and very variable both in shape and markings. Usually they are spotted and slashed throughout with reddish-brown, but sometimes the markings are thickly distributed towards the larger end, where they often become confluent and form a large circular blotch. In shape, some of the eggs are markedly elongate and others quite oval.”

Mr. J. J. Quelch records this species at Georgetown.

Family PLATALEIDÆ.

The members of this family are represented in all the continents of the World; one genus with one species being restricted to America. They are easily distinguished from all other birds by their large spatulate bills.

Genus **AJAIA** Reichenb.

Ajaia Reichenbach, Nat. Syst. Vögel, p. xvi, 1852. Type *A. ajaja* (Linn.).

This genus is characterized by its bare head and rosy plumage.

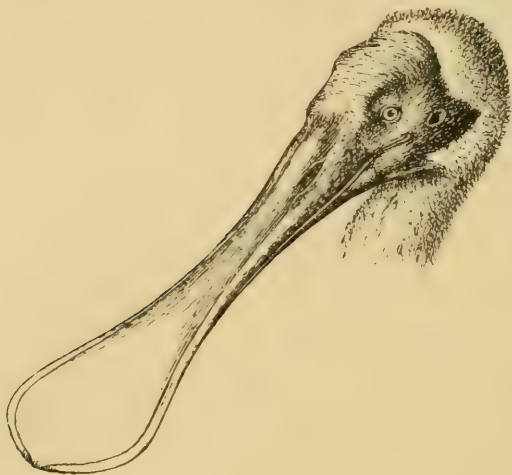


Fig. 42.—To show the bare head and shape of the bill.

96. *Ajaia ajaja*.

ROSEATE SPOONBILL.

Ajaia ajaja (Linn.), Syst. Nat. i. p. 140, 1758 ("Habitat in America australi"); Brabourne & Chubb, B. S. Amer. i. p. 48, no. 457, 1912.

Platalea ajaja Cab. in Schomb. Reis. Guian. iii. p. 755, 1848; Brown, Canoe and Camp Life, p. 265, 1876 (Takutu River), p. 271 (Cotinga River); Salvin, Ibis, 1886, p. 172.

Ajaia ajaja Sharpe, Cat. B. Brit. Mus. xxvi. p. 52, 1898 (Savana of British Guiana).

Immature. General colour white, with a pink tinge on the wings, scapulars, tail, flanks, axillaries, under surface of the wings, and, very slightly, on the abdomen; outer webs and tips of the bastard-wing, primary-coverts, and primary-quills pale brown.

Total length 600 mm., length of bill 150, wing 316, tail 87, tarsus 95.

The bird described was collected on the Abary River in July 1906.

Adult male. General colour above and below rose-pink; a tuft of feathers on the fore-neck, lesser upper wing-coverts, upper and under tail-coverts bright crimson; neck all round dull white. "Irides red; lores and orbits yellow-ochre; bare part of head from forehead to crown pale Naples-yellow; occiput and below ear sooty-black; around orifice of ear pale Naples-yellow; skin of chin and throat admixture of pale Naples-yellow and yellow-ochre; bill clear ashy, somewhat sooty between corrugations at base; legs dark crimson-lake, feet sooty-black" (*C. H. B. Grant*).

Culmen 157 mm., wing 345, tail 95, tarsus 99, middle toe and claw 89.

Adult female. Similar to the adult male in colour. Wing 337.

Breeding-season. Unknown in British Guiana.

Nest. "According to the natives, their nests are found on trees and in the reeds" (*Schomburgk*).

Eggs. Undescribed from British Guiana.

Range in British Guiana. Abary River (*McConnell collection*); Takutu River, Cotinga River (*Brown*); Great Savannas, Rupununi River (*British Museum*).

Extralimital Range. The greater portion of South America, east of the Andes to Argentina. Central America, and south United States.

Habits. Schomburgk remarks (*Reis. Guian. iii. p. 755*):—This beautiful bird haunts the oceanic river mouths and the coasts, and very rarely goes inland, although I was once much surprised to find a large flock on the sand-banks of the Takutu River, a little beyond the mouth of the Mahu—more especially as I never found it on the Savanna swamps and rivers. All the specimens I obtained in Takutu were old birds, but, curiously enough, the specimens I obtained near the coast were young birds. I shot a large number on the mussel-banks of the Waini, and during my stay there they were my chief diet. I was unable to obtain a specimen with the purple-red feathers on it. According to the natives, the Roseate Spoonbill's nest is found on trees and in the reeds. I have never found the nest myself. This bird is distributed all along the coast, and is of rather a shy nature, in fact one of the shyest of

all the birds in Guiana. The "Macusis" call it *Warara* and the "Warraus" *Ajaja*.

Mr. Barrington Brown (*Canoe and Camp Life*, p. 265) writes from the sand-beaches of the Takutu :—In the inlets off the sides of the river, were flocks of beautiful Roseate Spoonbills (*Platalea ajaja*).

Family CICONIIDÆ.

The members that compose this family are large birds with long bills, long legs, and small feet, in proportion to the size of the birds. Their distribution is in Asia, Africa, Australia, and America.

Genus MYCTERIA Linn.

Mycteria Linné, Syst. Nat. 10th ed. i. p. 140, 1758. Type *M. americana* Linn.

This genus is chiefly distinguished by the shape of the bill, which is decurved, somewhat rounded, blunt at the tip, and smooth in texture ; the head and neck are bare.



Fig. 43. —To illustrate the shape of the bill.

97. *Mycteria americana*.

WOOD IBIS.

Mycteria americana Linn. Syst. Nat. i. p. 140, 1758 (Brazil); Bra-bourne & Chubb, B. S. Amer. i. p. 48, no. 458, 1912.

Tantalus loculator Cab. in Schomb. Reis. Guian. iii. p. 756, 1848; Brown, *Canoe and Camp Life*, p. 104, 1876 (Rupununi River); Salvin, *Ibis*, 1886, p. 171; Sharpe, Cat. B. Brit. Mus. xxvi. p. 321, 1898; Beebe, *Our Search for a Wilderness*, pp. 353, 381, 1910 (Abary River).

"Nigger-heads" (*Quelch*), "Sowewies or Negrocopies" (*Brown*).

Adult male. Entire back, scapulars, long innermost secondaries pure white like the under wing-coverts, axillaries, breast, abdomen, and under tail-coverts; bastard-wing, primary-coverts, and quills black; tail greenish-black tinged with purple. "Head and upper part of neck bare and of a livid bluish colour, tinged with yellowish on the forehead; bill yellowish; legs blue, becoming blackish on the toes, and tinged with yellow on the webs."

Total length 940 mm., culmen 230, wing 475, tail 160, tarsus 210.

The description is taken from an example obtained on the Great Savannas in December 1902.

Adult female. Similar to the adult male.

Immature. Differs from the adult in having the head and neck feathered. Middle of crown and nape black where the feathers have white hair-like tips; sides of the crown, throat, and upper neck all round pale brown with dark shaft-streaks.

The immature bird was obtained on the Ituribisi River.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed in British Guiana.

Range in British Guiana. Ituribisi River, Rupununi Savannas (McConnell collection); Abary River (Beebe); Rupununi River (Brown); Whiroon, Abary River (Quelch).

Extralimital Range. Greater portion of South America to Argentina. Central and North America.

Habits. Schomburgk remarks (Reis. Guian. iii. p. 756) that he found this bird on all the swamps and sand-banks of the Savanna rivers, in large numbers, and associating with Mycteria (= *Jabiru mycteria*, p. 158) and Storks. Its habits are like those of the latter. He did not find the nest.

Mr. J. J. Quelch (Timehri (2) ii. p. 370) writes:—"Nigger-heads were seen standing in a swampy part of the creek about 150 yards ahead. A few birds raised their heads as we came in sight, but the rest remained in a dignified pose with their necks thrown back and their long black bills turned slightly downwards. The 'Nigger-heads' as they are termed, are smaller than the 'Nigrocops,' they are of a prevailing white or cream colour, with rich bluish bronze-green quills in their wings and tail; the head and the upper part of the neck are bare of feathers in the adult, and are covered with loose thin scales on a black ground; the bill and feet are black, and the former is thick, long, and

slightly curved towards the blunt tip. Obtained at Whiroon on the Abary."

Mr. Barrington Brown (Canoe and Camp Life, p. 104) writes:—

"Sowewies or negrocopes are numerous in this portion of the country, and are seen on the sand-beaches in the river.

"Their heads and necks are bare of feathers, being covered with a hard black skin, divided by furrows into plates. They are white, with black wings, and are frequently seen soaring high in the heavens in circles, mounting higher and higher till they appear like mere specks."

Genus **EUXENURA** Ridgw.

Euxenura Ridgway, Bull. U.S. Surv. Terr. iv. p. 249, 1878. Type *E. maguari* (Gmel.).

The chief characters by which this genus is distinguished are the peculiar form of the tail which is deeply forked, the under tail-coverts much elongated and projecting beyond the tail, the long and straight bill, the bare lores, and stripes on each side of the throat.



Fig. 44.—To illustrate the peculiar form of the tail.

98. *Euxenura maguari*.

MAGUARI STORK.

Euxenura maguari (Gmel.), Syst. Nat. i. p. 623, 1789 ("Habitat in calidiori America"); Sharpe, Cat. B. Brit. Mus. xxvi. p. 297, 1898 (British Guiana); Beebe, Our Search for a Wilderness, p. 155, 1910 (Waini); Brabourne & Chubb, B. S. Amer. i. p. 49, no. 459, 1912.

Ciconia maguari Cab. in Schomb. Reis. Guian. iii. p. 752, 1848; Quelch, Timehri (2) v. p. 107, 1891.

“Heri” (*Quelch*).

Adult. General colour white except the scapulars, tail, greater upper wing-coverts, bastard-wing, primary-coverts, and quills, which are black with a greenish gloss. “Legs and feet blood-red; bill lead-grey.”

Total length 1045 mm., culmen 200, wing 540, tail 180, tarsus 240.

The bird described has no exact locality, only that it was obtained in the Colony.

Adult male and female similar.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Waini River (*Beebe*).

Extralimital Range. Brazil, Argentina, Chile.

Habits. Schomburgk remarks (Reis. Guian. iii. p. 752) that this bird is found in company with *Mycteria americana* (= *Jabiru mycteria*, p. 158) in large flocks on the Savanna-bogs. It is very shy and difficult to obtain. Its nidification is unknown. The “Macusis” and “Arekunas” call it *Wakriang*.

Mr. Beebe (Our Search for a Wilderness, pp. 155, 156) writes:—“About four o’clock we were surprised to see a large black and white bird with long grey beak and red legs fly up from a mud-flat ahead and swing outwards and around us. The glasses showed a Maguari Stork in full breeding-colour; even the red caruncles around the eye and the long, filmy neck-feathers being visible. We had never expected to see the bird away from the pampas of the interior, and the sight of the splendid Stork was most exciting. It is almost as large as the Jabiru, white with black wings, scapulars, and tail, and is one of the most picturesque of the larger waders.

“We have had a pair of the birds alive for some time and have observed a curious thing about the tail. The real tail-feathers are forked, swallow-like, while the intervening space is filled up with the long, stiff under tail-coverts. In flight the whole are spread, making a parti-coloured fan of some eighteen feathers instead of the usual six pairs.”

Mr. J. J. Quelch (Timehri (2) v. p. 107) observed this species, the “Heri,” at Georgetown.

Genus **JABIRU** Hellm.

Jabiru Hellmayr, Abhandl. K. Baer. Akad. xxi. Abt. iii. p. 711 (1906).
Type *J. mycteria* (Licht.).

Tail and under tail-coverts normal. Bill very large, the terminal portion recurved. Head and neck bare with only a hairy patch on the occiput.



Fig. 45.—To illustrate the peculiar form of the bill.

99. *Jabiru mycteria*.**JABIRU.**

Jabiru mycteria (Licht.), Verz. Doubl. p. 76, 1823 (San Paulo, Brazil);
Brabourne & Chubb, B. S. Amer. i. p. 49, no. 460, 1912.
Mycteria americana (nec Linn.), Cab. in Schomb. Reis. Guian. ii. p. 133,
iii. p. 751, 1848; Brown, Canoe and Camp Life, p. 105, 1876 (Rupununi River), p. 260 (Cotinga River); Salvin, Ibis, 1886, p. 171;
Quelch, Timehri (2) ii. p. 365, 1888 (Abary River), v. p. 107, 1891
(Georgetown); Sharpe, Cat. B. Brit. Mus. xxvi. p. 314, 1898;
Beebe, Our Search for a Wilderness, p. 353, 1910 (Abary River).

“Negrocops or Jabiru” (Quelch).

Adult male. Entire plumage ivory white; bastard-wing, primary-coverts, and quills tipped with hoary grey. “Bill and feet black; iris brown.”

Total length 1150 mm, culmen 280, wing 630, tail 205, tarsus 300.

Immature female. Differs from the adult male in having a patch of brown on the upper breast and hoary grey feathers distributed on the scapulars and wings.

The specimens described are from the Great Savannas collected in November 1902.

Breeding-season. August and September (*Schomburgk*).

Nest. According to Mr. C. A. Lloyd this bird nests in the Silk Cotton tree and returns yearly to the same nest.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Great Savannas (*McConnell collection*); Rupununi River, Cotinga River (*Brown*); Abary River (*Beebe*).

Extralimital Range. The remainder of South America to Argentina. Central America.

Habits. Schomburgk states (*Reis. Guiana*, ii. p. 133) that when we arrived on the Takutu River we saw, on the tall trees on its border, the large nests of the Jabiru. The number of nests is very great here. I also found nests on the borders of the rivers in the well-wooded oasis, also in tall trees, but never in any large numbers. It sometimes builds its nest on the ledges of the rocks, and always selects those ledges that cannot be reached. Thus the eggs are unknown to me. They construct their nests on a horizontally-forked branch, and when finished the nest looks exactly like that of our Common Stork (*C. alba*). They make use of the old nest for their next brood, which is in August and September. The number of young ones is, as a rule, two, sometimes three, and these do not leave the nest until the following January or February. Male and female relieve each other regularly in hatching the eggs, and the free one at once returns when its hunger is satisfied, and seats itself close to the nest to keep its mate company or defend the home against monkeys and tiger-cats that continually menace the contents of the nest. During the breeding-season it loses its great shyness, and it sat quietly on its branch, looking down on all our doings underneath the tree on which its nest is built. It loves its eggs and young ones greatly, and defends them very boldly against any intruder. It is a most beautiful sight to see hundreds of these mighty birds suddenly startled up from the Savanna, flying in all directions in disorder, until they reach a height of 100-150 ft., when they begin to order themselves, and now with graceful ease to fly upwards in spiral lines, higher and higher, until their huge forms have almost disappeared from human vision and look only like a mere speck floating in the deep blue æther. If they are bent on a longer journey they fly in wedge-shaped form, and the foremost, after a time, is relieved by the second. In spite of their very clumsily-shaped bill, they manage with a masterly ease

to extract the mollusc *Ampullaria guianensis*, called 'apple-snails' (Iredale), and *A. papyracea*, from their shells, without tearing their soft bodies in any way. The 'Macusis' call it *Taramaru*, and the 'Warraus' call it *Doih*, and the 'Arawaaks' call it *Mora-coyasehre*, which means the Spirit of the Mora."

Schomburgk also remarks (Reis. Guian. iii. p. 751) that this species is very rarely found on the coast. Its favourite haunts are without a doubt the Savanna-bogs, and the banks of the Savanna rivers. At the first-mentioned place, they are often found in large flocks. On the Savanna rivers they are somewhat shy, and it is very difficult to obtain a specimen. During the breeding-season it is not at all shy. When caught young it is easily tamed. Its flesh is good, especially that of the young birds.

Mr. Barrington Brown (Canoe and Camp Life, p. 105) writes:—"The Great Jabiru with its long, stout, upcurved beak, black bare head, and scarlet-banded neck. When wounded and brought to bay, it inflates the skin of the scarlet-coloured portion like a great bladder. It stands fully five feet in height, and walks with a slow and stately tread."

Mr. J. J. Quelch (Timehri (2) ii. p. 365) observes:—"In the rainy season the large Waders, such as the Negrocop (*Mycteria americana*), are said to be plentiful in the surrounding savannah of the Abary River, but in dry weather they are difficult to find and even more so to obtain. He also met with the species at Georgetown (Timehri (2) v. p. 107).

Mr. C. A. Lloyd (Timehri (2) xi. p. 8) remarks:—"The Silk Cotton is the favourite tree of the Jabiru, *Mycteria americana*. This bird returns yearly to the same nest to breed. The Kanaku mountain-range seems to be their chief breeding-quarters on the Savanna."

Mr. Beebe (Our Search for a Wilderness, pp. 353, 354) remarks:—"A giant white Stork came into sight, towering above the Herons, with black head and neck, and the sun reflected from the distended scarlet skin of the lower neck. The bill had the faintest of tilts upward, and we knew we were looking for the first time at a living Jabiru, the biggest and perhaps the rarest wading bird of our continent. It stands fully five feet in height, and the spread of the wings is about eight feet. These birds do not nest on the Guiana savanna, but retire at the rainy season far into the interior."

Order ARDEIFORMES.

Family ARDEIDÆ.

This family is composed of large and medium-sized birds which are distributed over the known continents of the world ; fourteen genera occur in South America—thirteen of which are represented in British Guiana and fifteen species.

Genus ARDEA Linn.

Ardea Linné, Syst. Nat. 10th ed. i. p. 141, 1758. Type *A. cinerea* Linn.

This genus is distinguished by the elongated and lanceolate scapular plumes, long occipital crest-feathers, and ornamental plumes on the fore-neck.

100. *Ardea cocoi*.

COCOI HERON.

Ardea cocoi Linn. Syst. Nat. i. p. 237, 1766 ("Habitat in Cayana"); Cab. in Schomb. Reis. Guian. iii. p. 752, 1848; Brown, Canoe and Camp Life, p. 105, 1876 (Rupununi River); Salvin, Ibis, 1886, p. 169; Quelch, Timehri (2) ii. p. 365, 1888 (Abary River), iv. p. 334, 1890 (Berbice River); Lloyd, Timehri (2) xi. p. 9, 1897; Sharpe, Cat. B. Brit. Mus. xxvi. pp. 72, 268, 1898; Beebe, Our Search for a Wilderness, p. 234, 1910 (Marooka), p. 245 (Essequibo), p. 268 (Cuyuni), p. 353 (Abary River); Brabourne & Chubb, B. S. Amer. i. p. 49, no. 461, 1912.

"Heeri," "Honorora or Grey Crane" (*Quelch*); "Hunurie" (*Lloyd*).

Adult female. Crown of head and crest black, as also an irregular line down the fore-neck, the sides of breast, abdomen, bastard-wing, primary-coverts, and quills; throat, neck all round, edge of wing, thighs, and under tail-coverts white; back, scapulars, upper wing-coverts, inner secondaries, tail, under wing-coverts, axillaries, and sides of the body grey.

Total length 950 mm., culmen 150, wing 430, tail 150, tarsus 189, middle toe and claw 129.

The female described was obtained in the Colony but has no exact locality.

Adult male. Similar to the adult female in colour of plumage.

Total length 850 mm., culmen 158, wing 474, tail 194, tarsus 192, middle toe and claw 123.

An immature bird from the Abary River differs in having the neck grey, the absence of the black on the under surface, and the ornamental plumes on the back.

Breeding season. June (C. A. Lloyd).

Nest. "It nests on trees" (Schomburgk).

Eggs. Blue (C. A. Lloyd).

Range in British Guiana. Abary River (McConnell collection); Rupununi River (Brown & Whitely); Marooka, Essequibo River, Cayuni River, Abary River (Beebe); Berbice River (Quelch).

Extralimital Range. The remainder of South America to the Straits of Magellan.

Habits. Schomburgk remarks (Reis. Guian. iii. p. 572) that this large Heron was mostly found solitary on the borders of the rivers, walking against the stream. In mode of life it perfectly agrees with our common Heron. It seems to be distributed over the greater part of South America. It nests on trees, and its flesh is tasty and fat.

Mr. J. J. Quelch (Timehri (2) ii. p. 365) met with this species on the Abary River, and states that it is said to be plentiful in the surrounding savannah during the rainy season; but in the dry weather they are difficult to find, and even more so to obtain. He also observed it on the Berbice River (Timehri (2) iv. p. 334), and remarks that it rose at times in front and kept well out of range.

Genus **CASMERODIUS** Glog.

Casmerodius Gloger, Hand-u. Hilsfb. p. 412, 1842. Type *C. egretta* (Gmel.).

This genus is separated by its large size, the absence of a nuchal crest and ornamental pectoral plumes, and the long dorsal train which extends far beyond the tip of the tail.

101. **Casmerodius egretta.**

AMERICAN EGRET.

Ardea egretta Gmel. Syst. Nat. i. p. 629, 1789 (Cayenne); Salvin, Ibis, 1886, p. 169 (Bartica Grove); Quelch, Timehri (2) v. p. 107, 1891 (Georgetown); Lloyd, op. cit. (2) xi. p. 9, 1897.

Ardea luce Cab. in Schomb. Reis. Guian. iii. p. 752, 1848.

Herodias luce Brown, Canoe and Camp Life, p. 137, 1876 (Rupununi Savannas).

Herodias egretta Sharpe, Cat. B. Brit. Mus. xxvi. pp. 95, 270, 1898; Beebe, Our Search for a Wilderness, p. 137, 1910 (Barima), p. 234 (Marooka), p. 352 (Abary).

Egretta egretta Brabourne & Chubb, B. S. Amer. i. p. 49, no. 463, 1912.

Adult male (in breeding-plumage). The entire plumage above and below pure white with a long dorsal train of disintegrated feathers. Bill rich chrome-yellow, sometimes tinged with green, culmen black at tip; legs and feet black; iris yellow.

Total length 820 mm., culmen 106, wing 375, tail 152, tarsus 153, dorsal train 440.

The description of the male is taken from an example obtained at the Takutu Mountains.

Adult female (in breeding-plumage). Similar to the adult male.

Total length 790 mm., culmen 112, wing 350, tail 150, tarsus 130, dorsal train 375.

Male and female in winter plumage differ from the summer plumage in the absence of the dorsal train.

Breeding-season. June (C. A. Lloyd).

Nest. Unrecorded in British Guiana.

Eggs. Blue, being somewhat more pointed than those of *Ardea cocoi* (C. A. Lloyd).

Range in British Guiana. Upper Takutu Mountains, Rupununi Savannas, Abary River, Anarica River (*McConnell collection*); Bartica (*Whitely*); Barima, Marooka, and Abary Rivers (*Beebe*); Georgetown (*Queleh*).

Extralimital Range. The remainder of South America to the Straits of Magellan, West India Islands, Central and North America.

Habits. Schomburgk remarks (Reis. Guian. iii. p. 752) that this beautiful, large, dazzling, white Heron brightens and adorns the Savanna marshes and bogs, where it is found in large numbers amongst the other marsh-birds. I have only very rarely met with it on the coast. Its nidification is unknown.

Mr. Beebe (Our Search for a Wilderness, pp. 137, 353) gives the following note:—"American Egrets kept flying ahead of us for several miles, hemmed in by the lofty walls of foliage, alighting now and then and waiting for the steamer. At last, when only

ten yards distant, they rose and floated over our heads. Every dozen yards over the Savanna, a tall white figure stood motionless, silently watching us—American Egrets distributed for their day's fishing, hundreds dotting the marsh, each solitary, statuesque."

Genus **LEUCOPHOYX** Sharpe.

Leucophoyx Sharpe. Bulletin of the British Ornithologists' Club, iii. p. xxxix, 1894. Type *L. thula* (Molina).

This genus is distinguished by its smaller size, the nuchal crest and ornamental disintegrated pectoral plumes, and the short dorsal train which only reaches just beyond the tip of the tail.

102. *Leucophoyx thula*.

SNOWY EGRET.

Egretta thula (Molina), Sagg. Stor. Nat. Chili, p. 325, 1782 (Chili);

Brabourne & Chubb, B. S. Amer. i. p. 49, no. 464, 1912.

Ardea nevia Cab. in Schomb. Reis. Guian. iii. p. 753, 1848.

Ardea candidissima Salvin. Ibis, 1886, p. 169 (Bartica Grove); Quelch, Timehri (2) v. p. 107, 1891 (Georgetown); Lloyd, op. cit. xi. p. 9, 1897.

Leucophoyx candidissima Sharpe, Cat. B. Brit. Mus. xxv. pp. 124, 273, 1898 (Savana of British Guiana).

Egretta candidissima Beebe, Our Search for a Wilderness, p. 154, 1910 (Waini).

Adult female (in summer plumage). Entirely white above and below with a dorsal train, nuchal crest, and ornamental tuft on the breast, each composed of disintegrated feathers.

Total length 470 mm., culmen 73, wing 220, tail 74, tarsus 76, middle toe and claw 60.

We do not know the exact locality of the bird from which the description is taken.

Adult male (in summer plumage). Similar to the adult female.

Total length 545 mm., culmen 86, wing 265, tail 86, tarsus 100, middle toe and claw 73.

The winter plumage of the adult male and female differs from the summer plumage in the absence of the ornamental plumes.

Breeding-season. July and August (C. A. Lloyd).

Nest. A very frail platform-nest of twigs (C. A. Lloyd). It builds its nest on bushes near the coast (Schomburgk).

Eggs. Dull pale blue colour, a little larger than that of a Pigeon (C. A. Lloyd).

Range in British Guiana. Demerara (McConnell collection); Bartica (Whitely); Georgetown (Quelch); Waini River (Beebe).

Extralimital Range. South America generally to Chile, West India Islands, Central America, and the United States.

Habits. Schomburgk remarks (Reis. Guian. iii. p. 753) that this species is found in large numbers on the coast, where it associates with other species and enlivens the coast. In nesting-habits it resembles *Ibis rubra*. It builds its nest on bushes near the coast, or on the borders of the river-mouths.

Mr. C. A. Lloyd (Timehri (2) xi. p. 9, 1897) records the following observations on this species:—"Mr. D. Mackintosh, who has paid much attention to the coast-birds of Surinam, asserts that the Scarlet Ibis or Currie-Currie, *Eudocimus ruber*, never builds a nest of any sort, but takes forcible possession of those of the small White Egret, *Ardea candidissima*, for the purpose of depositing its eggs. He states that he has often witnessed this Ibis in the act of tumbling the young Egrets out of their nests. The small Egret breeds in vast 'rookeries' along the sea-coast, and Mr. Mackintosh has seen several square acres of low bourida bushes dotted with their nests. During the breeding-season large numbers of young Egrets fall a prey to the black Carrion Vulture, *Catharista atrata*, which may be seen hovering around the breeding-grounds, on the look out for a chance to swoop down on some unguarded nest and carry off its contents. The old birds vigorously defend their nests against the attacks of the Vulture, but as the Scarlet Ibis appears on the scene, they immediately desert their charges and fly away. . . .

"The small Egret makes a very frail platform-nest of twigs, and its eggs, which are of a dull pale blue colour, are a little larger than a Pigeon's. Their breeding-season in Surinam is in the months of February and March, but in this country it is said to be from July to August; possibly there may be two seasons in the year."

Genus **FLORIDA** Baird.

Florida Baird, Birds North America, p. 761, 1858. Type *F. cerulea* (Linn.).

This genus is characterized by the elongated and hair-like occipital plumes, the scapular or dorsal feathers, which extend beyond the end of the tail, and the ornamental feathers on the fore-neck.

103. *Florida cærulea*.

LITTLE BLUE HERON.

Ardea cærulea Linn. Syst. Nat. i. p. 143, 1758 (Carolina); Salvin, Ibis, 1886, p. 169.

Florida cærulea Sharpe, Cat. B. Brit. Mus. xxvi. pp. 100, 271. 1898;
Beebe, Our Search for a Wilderness, p. 154, 1910 (Waini);
Brabourne & Chubb, B. S. Amer. i. p. 49, no. 465, 1912.

Ardea cærulescens Cab. in Schomb. Reis. Guian. iii. p. 753, 1848.

Adult female (in breeding-plumage). General colour above and below dark slate-grey with long, lanceolate, ornamental plumes on the back and breast; head and neck all round as well as the throat deep maroon with a tinge of grey on the crown of the head and hind-neck, the nape is ornamented with long lanceolate plumes. "Bill light plumbeous on the basal half, terminal half black, lores and eyelids very pale dull greenish; legs and feet uniform pea-green, darker at the joints; iris sulphur-yellow."

Total length 458 mm., culmen 84, wing 255, tail 86, tarsus 94.

The female described was collected on the Supenaam River.

Adult male. Similar to the adult female.

Total length 500 mm., culmen 77, wing 267, tail 88, tarsus 93.

Two young examples of this species, one obtained on the Abary River in November 1906 and the other on the Supenaam River, are almost pure white with a little slaty-grey mottling on the marginal upper wing-coverts, bastard-wing, and tips of the primary-quills.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Supenaam River, Abary River (*McConnell collection*); Waini River (*Beebe*).

Extralimital Range. Brazil, Ecuador, Colombia, Aruba Island, Central America, West India Islands to the Eastern United States.

Habits. Schomburgk remarks (Reis. Guian. iii. p. 753) that this species lives in large numbers on the coast-bogs, on the borders of the river-mouths, and on the sand-banks and mud-banks along the coast.

We quote the following note from Mr. Beebe (Our Search for a Wilderness, p. 154):—"Little Blue Herons, the pure white immature and the slaty-blue adults being equally numerous. The

latter were very inconspicuous among the foliage, while the former stood out like marble statutes against green velvet. The colouring showed great asymmetrical variation, and one young bird with a single blue feather in the right wing was so tame that it kept almost abreast of our flotilla.

"The irregularity of moult resulted in most remarkable patterns, as in several birds, each of which had one white and one bluish wing."

Genus **HYDRANASSA** Baird.

Hydranassa Baird, Birds of North America, p. 660, 1858. Type *H. tricolor* (P. L. S. Müll.).

This genus is distinguished by the dorsal train, which is composed of hair-like plumes and extend beyond the end of the tail, the pendent occipital feathers, and the wide lanceolate plumes on the fore-neck.

104. *Hydranassa tricolor*.

TRICOLOURED HERON.

Ardea tricolor P. L. S. Müller, Syst. Nat. Suppl. p. 111, 1776 (Cayenne); Salvin, Ibis, 1886, p. 169.

Ardea leucogaster Cab. in Schomb. Reis. Guian. iii. p. 753, 1848.

Hydranassa tricolor Sharpe, Cat. B. Brit. Mus. xxvi. pp. 126. 273, 1898 (Ourumee, Savana of British Guiana); Brabourne & Chubb, B. S. Amer. i. p. 50, no. 466, 1912.

Hydranassa tricolor ruficollis Beebe, Our Search for a Wilderness, p. 154, 1910 (Waini).

Adult male. Upper back, wings, and tail dark slate-colour, dorsal train, which extends three inches beyond the tail, dirty white; head and neck all round, dark bluish slate-colour; a nuchal crest composed of purple and white feathers; the lanceolate feathers on the lower hind-neck and sides of breast lilac purple; chin white; throat rufous with an irregular line of rufous and white down the middle of the fore-neck; remainder of the under surface, including the under wing-coverts, white like the lower back and rump; the long under tail-coverts tipped with grey. Total length 457 mm., culmen (exposed portion) 87, wing 228, tail 76, tarsus 83, middle toe and claw 68.

Adult female. Similar to the adult male but smaller and the dorsal train shorter. Wing 218 mm.

The male and female from which the descriptions are taken were collected on the Ituribisi River in 1909.

Young. Differs from the adult in having the wings and tail paler slate-colour and the middle of the back more dusky, the upper wing-coverts edged with deep chestnut, and the sides of the face and the entire neck rich chestnut. We do not know the exact locality of this specimen.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Abary River (McConnell collection); Waini River (Beebe).

Extralimital Range. Northern Brazil, Venezuela.

Habits. Schomburgk remarks (Reis. Guian. iii. p. 753) that this species has the same mode of life and haunts as *Ardea cærulescens* = *Florida cærulea*, p. 166.

Genus **DORIPONUS** Hein. & Reichen.

Doriponus Heine & Reichenow, Nomencl. Mus. Hein. Orn. p. 308, 1890. Type *D. agami* (Gmel.).

Bill long, narrow, and compressed; occipital crest much elongated, broadly lanceolate, and acute at the tip; ornamental plumes on the lower back loosely webbed and overspreading the rump; plumes on the sides of the neck sickle-shaped, recurved, narrow, and acute; jugular feathers rather wide. Malar region naked. Tarsus nearly twice the length of the middle toe.

105. *Doriponus agami*.

AGAMI HERON.

(Plate V.)

Ardea agami Gmel. Syst. Nat. i. p. 629, 1789 ("Habitat in Cayenna"); Cab. in Schomb. Reis. Guian. iii. p. 753, 1848; Salvin, Ibis, 1886, p. 170 (Camacusa).

Agamia agami Sharpe, Cat. B. Brit. Mus. xxvi. pp. 135, 274, 1898 (Carimang River, Camacusa); Beebe, Our Search for a Wilderness, p. 219, 1910 (Barramannii); Brabourne & Chubb, B. S. Amer. i. p. 50, no. 468, 1912.

Doriponus agami Hein. & Reichen. Nomencl. Mus. Hein. Orn. p. 308, 1890 (British Guiana).

Adult male. Back, wings, and tail rich bottle-green; fore-neck,



Doriponus agami.
Agami Heron.

sides of breast, head, ornamental nape plumes and dorsal plumes bright lavender-grey, somewhat paler on the latter ; a line down the middle of the throat, breast, abdomen, under tail-coverts, sides of the body, axillaries, and under wing-coverts rich chestnut, some of the short scapulars also edged with the same colour ; forehead, sides of hinder face, and lower hind-neck glossy black ; sides of neck deep maroon ; throat, on either side of the central chestnut line, white.

Total length 690 mm., culmen 156, wing 273, tail 113, tarsus 107, middle toe and claw 67.

The description of the male is taken from a specimen collected on the Ituribisi River.

Adult female. Similar to the adult male.

Total length 760 mm., culmen 139, wing 263, tail 84, tarsus 94, middle toe and claw 67.

The young bird differs from the adult in having the hind-neck, sides of neck, upper back, and upper wing-coverts rust-brown ; under parts white or buffy-white, streaked with dark brown or blackish. This example was obtained on the Abary River.

Breeding-season. Unknown in British Guiana.

Nest. "The natives say that it nests in the trees" (*Schomburgk*).

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Ituribisi River, Bonasika River, Abary River (*McConnell collection*) ; Takutu River, Kamakusa, Kamarang River (*Whitely*) ; Barramanni (*Beebe*).

Extralimital Range. North Brazil, Cayenne, Trinidad, Peru, Colombia, Central America to Mexico.

Habits. Schomburgk remarks (*Reis. Guian.* iii. p. 753) that this very beautiful Heron seems only to prefer the thick, swampy, coast-woods. He only observed it in these woods, especially on the borders of the small brooks, and particularly in Aruka. Here they frequently sit with their necks drawn in, perched mostly on trees growing near the brook. He had not been able to observe its nesting-habits ; the natives say that it nests in the trees. The "Warraus" call it *Okoh*.

The following note is quoted from Mr. Beebe (*Our Search for a Wilderness*, p. 219) :—"Agami Herons, beautiful in their plumage of glossy green, chestnut and blue, were standing here and there in the shallows snatching the insects from the petals as they floated past."

Genus **NYCTICORAX** Forst.

Nycticorax Forster, Syn. Cat. Brit. Birds, p. 59, 1817. Type *N. nycticorax* (Linn.).

This genus is distinguished by the long and narrow nape plumes and the absence of dorsal ornamental feathers. The culmen is about equal to the tarsus in length, which is about equal to the middle toe and claw.

106. *Nycticorax nævius*.

BLACK-CROWNED NIGHT HERON.

Nycticorax nævius (Bodd.), Tabl. Pl. Enl. p. 56, 1783 (Cayenne); Salvin, Ibis, 1886, p. 170; Brabourne & Chubb, B. S. Amer. i. p. 50, no. 469, 1912.

Nycticorax gardeni Cab. in Schomb. Reis. Guian. iii. p. 755, 1848.

Nycticorax nycticorax Sharpe, Cat. B. Brit. Mus. xxvi. pp. 146, 275, part, 1898.

Adult male. Crown and nape, upper back and scapulars black, more or less glossed with green; lower back, wings, and tail ash-grey; base of forehead, eyebrow, sides of face, and throat white; elongated nape plumes, neck all round, and entire under surface, including the axillaries and under wing-coverts, creamy-white.

Total length 640 mm., culmen 79, wing 288, tail 114, tarsus 81, middle toe and claw 79.

The description of the male is taken from an example obtained on the Berbice River.

Adult female. Similar to the adult male.

The young differs from the adult in being brown on the back, the absence of the long nape plumes, the forehead, face, and neck streaked with pale brown and white.

A young male from the Abary River, obtained in January 1892, is cinnamon rufous streaked, or spotted, with white.

Breeding-season. Unknown in British Guiana.

Nest. "It builds its nest in low trees or bushes" (*Schomburgk*).

Eggs. "It lays two greenish eggs" (*Schomburgk*).

Range in British Guiana. Upper Takutu Mountains, Mazaruni River, Abary River, Berbice River (*McConnell collection*).

Extralimital Range. Trinidad, Venezuela, Ecuador, Colombia, Lesser Antilles, Central and North America, Europe, Asia, and Africa.

Habits. Schomburgk writes (Reis. Guian. iii. p. 755) this beautiful Heron has exactly the same habits as those of *N. violaceus*. It is not very common in British Guiana and I rarely met with it.

Genus **NYCTANASSA** Stejn.

Nyctanassa Stejneger, Proc. U.S. Nat. Mus. x. p. 295, note, 1887.
Type *N. violacea* (Linn.).

This genus is distinguished chiefly by having the tarsus longer than the middle toe and claw, a long nuchal crest, and the dorsal plumes much developed, reaching to the tip of the tail, the feathers being disintegrated on their margins.

107. *Nyctanassa violacea*.

YELLOW-CROWNED NIGHT HERON.

- Nycticorax violaceus* (Linn.), Syst. Nat. i. p. 143, 1758 (Carolina); Cab. in Schomb. Reis. Guian. iii. p. 754, 1848; Brabourne & Chubb, B. S. Amer. i. p. 50, no. 472, 1912.
Nyctherodius violaceus Salvin, Ibis, 1886, p. 170; Quelch, Timehri (2) v. p. 107, 1891 (Georgetown).
Nyctanassa violacea Sharpe, Cat. B. Brit. Mus. xxvi. pp. 130, 274 1898 (Savana); Beebe, Our Search for a Wilderness, p. 154, 1910 (Waini).

“Blue Quaak” (*Quelch*).

Adult male. General colour lead-grey broadly streaked with black on the back and wings; fore-neck, breast, and remainder of under surface uniform grey; head, throat, and hind-neck black with a patch of white behind the eye, forehead and middle of crown white with elongated black and white ornamental feathers on the nape.

Total length 510 mm., culmen 70, wing 244, tail 85, tarsus 72, middle toe and claw 60.

The male described was collected on the Great Savannas.

Adult female. Similar in colour to the adult male, but slightly larger than the bird described.

Total length 556 mm., culmen 77, wing 262, tail 97, tarsus 80, middle toe and claw 64.

A young bird from the Abary River differs from the adult in

being broadly streaked on the underparts with brown and white and more narrowly with black and white on the sides of the face.

Breeding-season. Unknown in British Guiana.

Nest. "It builds its nest in low trees or bushes" (*Schomburgk*).

Eggs. "It lays two greenish eggs" (*Schomburgk*).

Range in British Guiana. Abary River (*McConnell collection*); Great Savannas (*British Museum*); Waini River (*Beebe*).

Extralimital Range. South-east Brazil, Ecuador, Trinidad, West India Islands, Central and North America.

Habits. Schomburgk states (*Reis. Guian.* iii. p. 754) that this bird lives in the Savanna swamps and in the neighbourhood of rivers. It builds its nest, in which it lays its two greenish eggs in low trees or bushes in the proximity of swamps and rivers.

Mr. Quelch met with this species in Georgetown and remarks (*Timehri* (2) v. p. 107):—"The Blue Quaak (*Nyctherodius violaceus*) may at times be encountered on the outskirts of the town, and along the sea or river border, or may be seen flying overhead."

Genus COCHLEARIIUS Briss.

Cochlearius Brisson, *Orn.* vi. p. 506, 1760. Type *C. cochlearius* Linn.

The peculiar form of the bill distinguishes this genus from all



Fig. 46.—To illustrate the peculiar form of the bill.

others. It is flat and much broader than high and slightly exceeds the length of the tarsus.

108. *Cochlearius cochlearius*.

BOAT-BILL.

- Cochlearius cochlearius* Linn. Syst. Nat. p. 233, 1766 (Guiana);
 Brabourne & Chubb, B. S. Amer. i. p. 50, no. 473, 1912.
Cancroma cochlearia Cab. in Schomb. Reis. Guian. iii. p. 755, 1848;
 Brown, Canoe and Camp Life, p. 257, 1876 (Rupununi River);
 Salvin, Ibis, 1886, p. 171; Quelch, Timehri (2) ii. p. 367, 1888
 (Abary River); Lloyd, op. cit. xi. p. 9, 1897; Sharpe, Cat. B. Brit.
 Mus. xxvi. p. 163, 1898 (Takutu River, Carimang River); Beebe,
 Our Search for a Wilderness, p. 234, 1910 (Marooka).

“Quaaks” (*Quelch*). “Wallaba bird” (*Brown*).

Adult male. Hind-neck, back, wings, and tail silvery grey; forehead, throat, breast, and thighs white, or creamy-white; top of head sides of body, and under wing-coverts slaty black; middle of abdomen and under tail-coverts rufous.

Total length 525 mm., culmen 82, width of bill 39, wing 290, tail 134, tarsus 78, middle toe and claw 67.

The description of the male is taken from a specimen obtained on the Abary River in September 1907.

Adult female. Similar to the male in colour but apparently slightly smaller. Wing 285 mm.

The young of this species differ from the adult in being cinnamon rufous above, except the head which is black, and buffy white below.

Breeding-season. “March” (*C. A. Lloyd*).

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Ituribisi River, Bonasika River, Abary River (*McConnell collection*); Rupununi River (*Brown*); Takutu River, Kamarang River, Ourunei (*Whitely*); Marooka (*Beebe*).

Extralimital Range. Trinidad, Venezuela, Colombia, Ecuador, Peru, Brazil.

Habits. This bird, according to Schomburgk (Reis. Guian. iii. p. 755), is found solitary in the dense swampy woods in the neighbourhood of small rivers. He found it sitting on a tree near a brook, and this was the only one that he met with. No doubt it hides itself in its dense favourite haunts. With its bill it produces a noise very much like that of the White Stork of Europe (*Ciconia ciconia*); this he observed in a winged bird kept in confinement by

the Indians. Its nidification is unknown. The "Warraus" call it *Wakaineh* and the "Macusis" *Warrarapa*.

Mr. J. J. Quelch (Timehri (2) ii. p. 362) observed this species on the Abary River where, he says, that the "Quaaks" were heard all through the day.

Mr. C. A. Lloyd (Timehri (2) xi. p. 9) remarks on this species:—"According to the Indians, the Boat-bill, *Canceroma cochlearia*, lays in March, but I have never seen its eggs."

Mr. Barrington Brown (Canoe and Camp Life, p. 257) remarks:—"A Wallaba bird of a greyish colour, with large boat-shaped bill. These birds are nocturnal in their habits, roosting in trees over swamps during the day, where they utter a curious frog-like call."

Mr. J. J. Quelch (Timehri (2) ii. p. 367) writes:—"It was disappointing also to find that all the Boat-bills were in immature plumage. Not a single specimen was crested with the remarkable, long, black plumes that give so striking an aspect to the bird. In place of these there was a bluish-black tuft of down, both on the white and on the younger reddish-brown specimens."

Genus *PILHERODIUS* Reichenb.

Pilherodius Reichenbach, Nat. Syst. Vögel, p. xvi, 1852. Type *P. pileatus* (Bodd.).

The two occipital plumes are very long and closely webbed; no dorsal plumes; feathers on the fore-neck rather broad. The bill exceeds the middle toe in length.

109. *Pilherodius pileatus*.

CAPPED HERON.

Pilherodius pileatus (Bodd.), Tabl. Pl. Enl. p. 54, 1783 (Cayenne); Salvin, Ibis, 1886, p. 171; Brabourne & Chubb, B. S. Amer. i. p. 51, no. 475, 1912.

Nycticorax pileatus Cab. in Schomb. Reis. Guian. iii. p. 754, 1848.

Pilherodius pileatus Sharpe, Cat. B. Brit. Mus. xxvi. p. 171 (Rupurumi River), p. 277 (Savana), 1898.

Adult male. Crown of head black with two long white nuchal plumes; forehead and remainder of the plumage white tinged, in places, with creamy buff; the bastard-wing, primary-coverts, and outer primary-quills have black shafts.

Total length 585 mm., culmen 80, wing 280, tail 98, tarsus 98, middle toe and claw 69.

The description is taken from an example procured on the Abary River in September 1907.

Adult female. Similar to the adult male but apparently rather smaller. Wing 264 mm.

Breeding-season. Unknown in British Guiana.

Nest. "It builds its nest in low trees" (*Schomburgk*).

Eggs. "It lays two eggs" (*Schomburgk*).

Range in British Guiana. Abary River, Great Savannas (*McConnell* collection); Rupununi River, Ourunei (*Whitely*).

Extralimital Range. Brazil and Eastern Peru.

Habits. Schomburgk states (*Reis. Guian. iii. p. 754*) that this species is found singly or in pairs, but rarely in flocks, in the neighbourhood of large rivers, where they perch on the bushes. Its habits are the same as those of the Common Heron of Europe (*Ardea cinerea*). It builds its nest in low trees and lays two eggs. The "Warraus" call it *Wonu*, the "Macusis" *Unoruima*, and the "Arekunas" *Onareh*.

Genus BUTORIDES Blyth.

Butorides Blyth, Cat. Birds Asiatic Soc. p. 281, 1849. Type *B. javanica* (Horsf.).

The members of this genus have a crest of long and lanceolate feathers; dorsal plumes similar but more rounded at the ends; feathers on the fore-neck broader. The bill exceeds the tarsus in length.

110. *Butorides striata*.

BLACK-CROWNED HERON.

Butorides striata (Linn.), Syst. Nat. i. p. 238, 1766 (Surinam); Sharpe, Cat. B. Brit. Mus. xxvi. pp. 175, 279, 1898 (Bartica Grove); Beebe, Our Search for a Wilderness, p. 129, 1910 (Georgetown), p. 355 (Abary River); Brabourne & Chubb, B. S. Amer. i. p. 51, no. 476, 1912.

Ardea scapularis Cab. in Schomb. Reis. Guian. iii. p. 753, 1848.

Ardea cyanurus Salvin, Ibis, 1886, p. 170 (Bartica Grove).

"Chow," "Shypook" (*Quelch*); "Chough" (*Lloyd Price*).

Adult male. Head and nape uniform glossy bottle-green, similar

in colour to the back, wings, and tail, the ornamental feathers on the back tinged with grey, and the scapulars and wing-feathers margined with white, or buffy-white; hind-neck, sides of face, abdomen, sides of body, axillaries, and under wing-coverts grey, somewhat paler on the vent and under tail-coverts; throat and fore-neck white with an irregular line of dark chestnut-brown feathers down the middle which spreads out and becomes pale rufous on the breast; outer edge of wing white.

Total length 365 mm., culmen 66, wing 170, tail 60, tarsus 51, middle toe and claw 54.

The male described was obtained on the Mazaruni River.

Adult female. Like the adult male in colour but rather larger in measurements.

Total length 393 mm., culmen 63, wing 174, tail 64, tarsus 51, middle toe and claw 51.

The immature bird differs from the adult in having the crown of the head streaked with white, the back dusky grey, the buffy-white spots on the wings, and the under surface coarsely streaked with white and greyish-brown.

Breeding-season. Unknown in British Guiana.

Nest. Built close to the surface of the water (*Beebe*). "In low thick bushes near the water—is simply a few dry sticks put together" (*Lloyd Price*).

Eggs. "The two eggs are a very pale blue, and quickly fade" (*Lloyd Price*).

Range in British Guiana. Upper Takutu Mountains, Abary River, Mazaruni River, Great Savannas (*McConnell collection*); Bartica (*Whitely*); Georgetown and Abary River (*Beebe*).

Extralimital Range. South America generally to Argentina.

Habits. Schomburgk remarks (*Reis. Guian.* iii. p. 753) that this small beautiful Heron prefers the coast; here it is mostly found, always singly, in the canals that drain the plantations, and on the swamps near the coast. When alarmed and flying away, it utters a screeching short note. He often found its nest on trees or bushes.

We quote the following from Mr. Lloyd Price (*Timehri* (2) v. p. 65):—"The nest of the Chough or Shypook (*Ardea cyanura* = *Butorides striata*) will be frequently met with in low thick bushes near the water; it is ridiculously small for the size of the bird,

and is simply a few dry sticks put together. The two eggs are a very pale blue, and quickly fade."

Mr. Quelch (Timehri (2) v. p. 106) observed this species at Georgetown, and remarks:—"In the Botanic Gardens, and on the outskirts of the town, in the neighbourhood of water, the small blue-grey and brown Herons (*Ardea cyanura*) are always to be met with. These are commonly known as Chow (ow as in how), on account of their cry, though the term Shypook is just as commonly applied to them."

Mr. Beebe (Our Search for a Wilderness, p. 355) gives the following note:—"From almost every bush along the river bank little Guiana Green Herons flew up from their nests, built close to the surface of the water. These herons 'froze' like Bitterns when they alighted, standing motionless with the bills at an angle of 45°. Along the railroad they were semi-domesticated, flying fearlessly in and out of the coolie yards, and snatching bits of food from the very doorways of the huts."

- Genus **TIGRISOMA** Swains.

Tigrisoma Swainson, Zool. Journ. iii. p. 362, 1827. Type *T. lineatum* (Bodd.).

In this genus the front aspect of the tarsus is hexagonally scaled, the inner toe is exceeded in length by the outer one, the claws are strongly curved, the neck-feathers are loose and fluffy, the malar region is naked, and the tail consists of twelve feathers.

111. *Tigrisoma lineatum*.

TIGER BITTERN.

Tigrisoma lineatum (Bodd.). Tabl. Pl. Enl. p. 52, 1783 (Cayenne); Sharpe, Cat. B. Brit. Mus. xxvi. pp. 194, 281, 1898 (Merumé Mts.); Beebe, Our Search for a Wilderness, p. 281, 1910 (Aremu). *Tigrisoma tigrinum* Cab. in Schomb. Reis. Guian. iii. p. 753, 1848; Brown, Canoe and Camp Life, p. 47, 1876 (Cartoonie). *Tigrisoma brasiliense* (Linn.), Cab. in Schomb. Reis. Guian. iii. p. 574, 1848; Salvin, Ibis, 1886, p. 170 (Merumé Mts., Camacusa).

"Tiger-bird" (*Brown*).

Adult male. Head and entire neck bright chestnut, duller on the throat and fore-neck where a portion of the feathers are white lined with black, there are also some black spots to the feathers on the hind-neck; back, wings, and tail blackish tinged with

green and freckled with rufous or buffy-white; tail uniform; bastard-wing, primary-coverts, and quills darker and more uniform, many of the feathers having white edges at the tips; abdomen and under tail-coverts tawny brown; axillaries, under wing-coverts, and sides of body black barred with white.

Total length 630 mm., culmen 91, wing 290, tail 115, tarsus 98, middle toe and claw 68.

The description is based on a specimen collected on the Bonasika River.

The adult female appears to be like the adult male, but there is no series available, and consequently we are unable to form any conclusive opinion.

The young birds differ from the adults in being fawn colour, all the feathers marked with black; these marks assume different shapes on the various parts of the body.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Bartica, Bonasika River, Abary River, Anarica River (*McConnell* collection); Merumé Mountains, Kamakusa (*Whitely*); Cartoonie (*Brown*); Aremu River (*Beebe*).

Extralimital Range. Trinidad, North Brazil, Peru, Ecuador.

Habits. According to Schomburgk (*Reis. Guian.* iii. p. 753) this bird is found singly in the solitudes of the thick swampy coast-woods and the borders of rivers in similar districts. The "Warraus" call it *Okoh*, and the "Macusis" *Worna*.

Mr. Barrington Brown, who met with the species on the Cartoonie River, remarks (*Canoe and Camp Life*, p. 47):—"The call of this bird, which is uttered early in the morning and late in the evening, resembles that of the Jaguar, and thus obtained the name of Tiger-bird."

Genus **IXOBRYCHUS** Billberg.

Ixobrychus Billberg, *Synops. Faunæ Scand.* i. p. 166, 1828. Type *I. minutus* (Linn.).

The birds of this genus are of small size, with ten tail-feathers, the tibia feathered down to the tarsal joint, the space behind the eye feathered, a small crest of pointed feathers, and the bill serrated.

112. *Ixobrychus erythromelas*.

CHESTNUT-BACKED BITTERN.

Ixobrychus erythromelas (Vieill.), N. Diet. d'Hist. Nat. xiv. p. 422, 1817 (Paraguay); Brabourne & Chubb, B. S. Amer. i. p. 52, no. 485, 1912.

Ardetta erythromelas Sharpe, Cat. B. Brit. Mus. xxvi. p. 234 (Carimang River), p. 284 (Savana), 1898.

Ardetta exilis (nec Gmel.), Salvin, Ibis, 1886, p. 501 (Carimang River).

Ardetta involucris (nec Vieill.), Sharpe, Cat. B. Brit. Mus. xxvi. p. 284, 1898 (Savana).

Adult male. Crown of head, back, and tail glossy greenish black; sides of face, hind-neck, lesser upper wing-coverts chestnut, the median ones ochreous brown, greater upper wing-coverts and outer webs of innermost secondaries rich chestnut; bastard-wing and primary-coverts blackish tipped with pale chestnut; quills dark brown, outer edge of first primary rufous; throat white with a dark line of feathers down the middle; remainder of the under surface rufous-buff.

Total length 260 mm., culmen 45, wing 115, tail 42, tarsus 42, middle toe and claw 41.

The male described was collected on the Abary River in September 1906.

The female, which is also from the Abary River, differs from the male in having the back chestnut instead of black and the underparts paler.

Young birds differ from the adult in having pale edgings to the feathers of the upper parts.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Itaribisi River, Abary River, Lamaha (McConnell collection); Great Savannas (British Museum); Kamarang River (Whitely).

Extralimital Range. Trinidad, Peru, Bolivia, Paraguay, South-east Brazil, Panama.

Habits. Unrecorded in British Guiana.

Genus **ZEBRILUS** Bonap.

Zebrilus Bonaparte, Compt. Rend. Paris, xl. p. 723, 1855. Type
Z. undulatus (Gmel.).

Tail-feathers ten in number ; malar region and lower portion of tibiae completely feathered ; bill and feet small ; culmen about equal to the tarsus in length, both exceed that of the middle toe and claw.

113. *Zebrilus undulatus*.

ZIGZAG BITTERN.

Zebrilus undulatus (Gmel.), Syst. Nat. i. p. 637, 1789 ("Habitat in Cayenna"); Brabourne & Chubb, B. S. Amer. i. p. 52, no. 487, 1912.

Zebrilus pumilis Quelch, Timehri (2) iv. p. 343, 1890 (Berbice River); Sharpe, Cat. B. Brit. Mus. xxvi. p. 241, 1898 (British Guiana).

Adult (dark phase). General colour above black with minute wavy buff cross-bars and frecklings ; some of the nuchal crest-feathers are uniform black like the tail and quills, the latter being white at the base on the inner webs ; under surface buff heavily blotched and thickly freckled with black ; under wing-coverts paler buff with a white patch at the base of the quills.

Total length 265 mm., culmen 42, wing 135, tail 49, tarsus 43, middle toe and claw 38.

The bird described was collected on the Abary River in September 1907.

Adult (rufous phase). General colour above blackish with narrow wavy rufous cross-lines on the back and wings ; forehead maroon-chestnut—this colour also pervades the hinder crown and nape ; sides of face and sides of the neck deep rufous, becoming paler on the throat and breast ; abdomen similar in colour to the throat but less mixed with white in the middle, and on the under tail-coverts and under wing-coverts ; the feathers on the abdomen and sides of the body have dark shaft-streaks.

Total length 325 mm., culmen 37, wing 141, tail 58, tarsus 40, middle toe and claw 37.

There are four examples of this species in the McConnell collection, which are all of the dark phase. The description of the rufous phase is taken from a specimen in the British Museum, collected by Sir Everard im Thurn on the Corentyne

River, British Guiana, in November 1879—Salvin-Godman collection.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Abary River (*McConnell collection*); British Guiana (*Sir E. im Thurn*); Upper Berbice River (*Quelch*).

Extralimital Range. Central Brazil.

Habits. Unrecorded in British Guiana.

Mr. J. J. Quelch (*Timehri* (2) iv. p. 343) mentions that he obtained a good example of this species on the Upper Berbice River.

Genus BOTAURUS Steph.

Botaurus Stephens, in Shaw's Gen. Zool. xi. pt. 2, p. 592, 1819. Type *B. stellaris* (Linn.).

This genus also belongs to the group of this family which has ten tail-feathers; the colour is tawny-buff marked with dark brown; the bill is serrated, the toes are long, the middle one exceeding the tarsus in length.

114. *Botaurus pinnatus*.

PINNATED BITTERN.

Botaurus pinnatus (Wagl.), Isis, 1829, p. 663 (Bahia); Cab. in Schomb. Reis. Guian. iii. p. 754, 1848; Salvin, Ibis, 1886, p. 170; Sharpe, Cat. B. Brit. Mus. xxvi. p. 262, 1898 (Aunai); Brabourne & Chubb, B. S. Amer. i. p. 52, no. 489, 1912.

Botaurus lentiginosus (nec Mont.), Cab. in Schomb. Reis. Guian. iii. p. 754, 1848; Salvin, Ibis, 1886, p. 170; Sharpe, Cat. B. Brit. Mus. xxvi. p. 259, 1898; Brabourne & Chubb, B. S. Amer. i. p. 52, no. 488, 1912.

Adult male. General colour above dark brown, or black, varied with buff or creamy-white markings on the back and wings; fore part of the crown almost uniform black; hinder crown, nape, hind-neck, and sides of neck regularly barred with dark brown and buffy-white; ear-coverts inclining to uniform buff; under surface buffy-white, the feathers more or less mottled or streaked with brown or rufous-brown.

Total length 650 mm., culmen 89, wing 305, tail 105, tarsus 106, middle toe and claw 120.

Adult female. Similar to the adult male. Wing 265 mm.

The male described was collected on the Abary River, and the female on the Berbice River.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Bonasika River, Abary River, Berbice River (*McConnell collection*).

All the specimens of this species that we have examined, both in the McConnell collection and that of the British Museum, belong to *B. pinnatus* Wagl. ; and we very much doubt if *B. lentiginosus* Mont. has really occurred in British Guiana.

Habits. Schomburgk states (Reis. Guian. iii. p. 754) that this bird inhabits the Savanna swamps and that its habits are the same as those of the European Bittern (*B. stellaris*). The "Macusis" call it *Tunaborueka* and the "Warraus" *Unko*.

Mr. J. J. Quelch (Timehri (2) ii. p. 363) observed this species on the Abary River, where he says that the "quaaks were heard all through the day."

Order PALAMEDEIFORMES.

Family PALAMEDEIDÆ.

The chief characters of this family are the large body, small head, short legs, and large feet. It includes two genera and three species, all of which are restricted to South America. One genus and one species are represented in British Guiana.

Genus PALAMEDEA Linn.

Palamedea Linné, Syst. Nat. i. p. 232, 1766. Type *P. cornuta* Linn.

This monotypic genus is easily distinguished by the frontal horn on the forehead, the strong spurs on the wings, and the long toes, which are slightly webbed at the base.

115. *Palamedea cornuta*.

HORNED SCREAMER,

(Plate VI.)

Palamedea cornuta Linn. Syst. Nat. i. p. 232, 1766 ("Brasilia"); Cab. in Schomb. Reis. Guian. iii. p. 571, 1848; Salvin, Ibis, 1886, p. 172;



Palamedea cornuta.
Horned Screamer.

Quelch, Timehri (2) ii. p. 366, 1888 (Abary River); Salvad. Cat. B. Brit. Mus. xxvii. p. 3, 1895; Beebe, Our Search for a Wilderness, p. 381, 1910 (Abary River); Brabourne & Chubb, B. S. Amer. i. p. 52, no. 490, 1912.

“Mahooka” (*Quelch*).

Adult female. Head and neck all round, breast, sides of body, under tail-coverts, back, wings, and tail black; crown of head and nape speckled with white; the feathers of the lower neck, all round, with silvery grey bases; the lesser marginal upper wing-coverts white, or smoky white with brown tips; abdomen, thighs, lower flanks, and under wing-coverts white. “Upper mandible dark brown-grey, lower mandible paler; frontal horn yellowish white; legs and feet ash-grey; iris bright orange.”

Total length 655 mm., culmen 46, wing 520, tail 200, tarsus 123, middle toe and claw, 143.

The adult male is said to be similar to the adult female.

We do not know the exact locality of the bird described above.

Breeding-season. Unrecorded in British Guiana.

Nest. “Built on the ground” (*Schomburgk*).

Eggs. “The clutch consists of two eggs” (*Schomburgk*).

Range in British Guiana. Generally distributed (*Schomburgk*); Abary River (*Quelch & Beebe*).

Extralimital Range. Venezuela, Ecuador, Eastern Peru, Northern Brazil.

Habits. Schomburgk states (Reis. Guian. iii. p. 751) that although this bird appears to be distributed over the whole of British Guiana, he had only seen two individuals, though he had often heard its peculiar voice in the woods; the first, which he was fortunate enough to shoot, was near Asecota. After the breeding-season it is found in small companies of four to six in number. Its food is supposed to consist chiefly of vegetables. The nest is, according to the Indians, built on the ground and the bird lays two eggs only. The natives do not eat its flesh, and only use the large tail-feathers as arrow guides.

Mr. J. J. Quelch (Timehri (2) ii. p. 366) observed this species on the Abary River, and remarks:—“The ‘Mahooka’ or Horned Screamer (*Palamedea cornuta*)—a bird about the size of a very large turkey, with a horny string or whip-like appendage at the back of the head, and with two large and formidable spurs on each wing. These birds, to judge by their curiously loud clanging cry in the morning, are common all along this part of the creek;

but this specimen was the only one obtained on Tiger Island in the Æta swamp."

Mr. Beebe (Our Search for a Wilderness, p. 381) gives the following note:—"Faintly from behind the house, from the edge of the distant eta bush itself, comes in the evenings a low sound, gaining in volume until the syllables may be framed to human speech—Mo-hóo-ca! Mo-hóo-ca! and we are listening to the evening call of the Horned Screamer, a bird known to us only from books."

Order PHÆNICOPTERIFORMES.

Family PHÆNICOPTERIDÆ.

The members that compose this family are easily distinguished by their small heads, long thin necks, small bodies, and very long legs with webbed toes. They are distributed in Europe, Africa, Asia, Florida, and the Gulf States of North America, Central and South America to the Galapagos Islands.

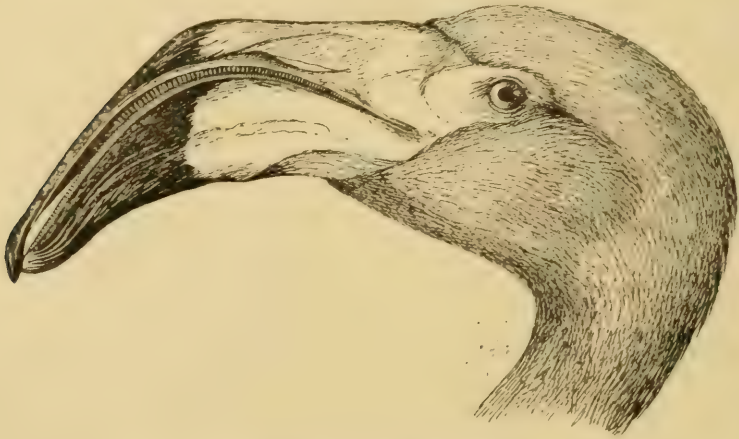


Fig. 47.—To illustrate the peculiar shape of the bill.

Genus PHÆNICOPTERUS Linn.

Phænicopterus Linné, Syst. Nat. 10th ed i. p. 139, 1758. Type
P. ruber Linn.

The chief characters of this genus are the very peculiar shaped bill and the naked throat.

116. *Phenicopterus ruber*.

FLAMINGO.

Phenicopterus ruber Linn. Syst. Nat. 10th ed. i. p. 139, 1758 (Jamaica, Cuba, and Bahamas); Cab. in Schomb. Reis. Guian. iii. p. 761, 1848; Salvin, Ibis, 1886, p. 172; Salvad. Cat. B. Brit. Mus. xxvii. p. 9, 1895; Lloyd, Timehri (2) xi. p. 6, 1897 (Waini Creek); Oates, Cat. Birds Eggs Brit. Mus. ii. p. 136, 1902 (Savanas of British Guiana); Beebe, Our Search for a Wilderness, p. 234, 1910 (Marooka); Brabourne & Chubb, B. S. Amer. i. p. 53, no. 493, 1912.

Adult. General colour pale vermilion which varies in the intensity of colour on different portions of the body; axillaries bright scarlet; primary and secondary quills black; greater under wing-coverts black. Bill yellow, tip black; tarsi and feet lake red; iris brown.

Total length 960 mm., culmen 114, wing 350, tail 145, tarsus 260.

The bird described was collected on the Barima River.

Breeding-season. August (*Lloyd*).

Nest. "Resembles a large yam heap, and is composed of vegetable substances thrown up by the sea. It is about two feet high and shaped like a truncated cone" (*Lloyd*).

Eggs. "Have thick chalky-white shells, are a little longer than those of a Goose, and seem to be from two to three in number" (*Lloyd*).

Range in British Guiana. Barima River (*McConnell collection*); Marooka (*Beebe*); Waini River (*Lloyd*).

Extralimital Range. Northern Brazil, West India Islands, South-east United States, Central America, Galapagos Islands.

Habits. Schomburgk (Reis. Guian. iii. p. 761) says that this bird breeds in British Guiana, but is only found on the coast at irregular intervals and generally on the sand-banks at the mouths of the oceanic rivers.

Mr. C. A. Lloyd (Timehri (2) xi. p. 6) observed this species in British Guiana, and remarks:—"The seashore of the Waini Creek is one of the known breeding-places of the Flamingo, *Phenicopterus ruber*, in this country. The nest resembles a large yam heap, and is composed of vegetable substances thrown up by the sea. It is about two feet high and shaped like a truncated cone. The eggs are laid in August and have thick chalky-white shells. They are a little longer than those of a Goose and seem to be from two to three in number."

Order **ANSERIFORMES.**Family **ANATIDÆ.**

The members of this family, which vary considerably in size, are distinguished chiefly by the shape of their bills. They are distributed over the greater part of the known world. There are about two hundred species, of which fifty-one occur in South America, and eight of these are represented in British Guiana.

Genus **CAIRINA** Flem.

Cairina Fleming, Phil. of Zool. ii. p. 260, 1822. Type *C. moschata* (Linn.).

This genus is characterized by having the lores naked; the forehead and base of the bill ornamented with caruncles; and an elevated crest of recoiled feathers on the fore part of the head.

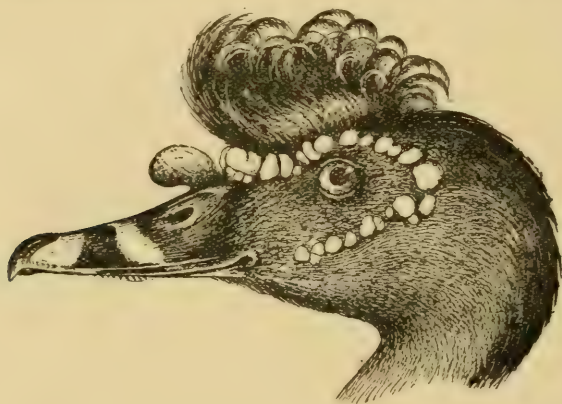


Fig. 48.—To show the elevated crest and the caruncles on the forehead and sides of the face.

117. *Cairina moschata*.

MUSCOVY DUCK.

Anas moschata Linn. Syst. Nat. 10th ed. i. p. 124, 1758 (Brazil); Brown, Canoe and Camp Life, p. 105 (Annai), p. 137 (Rupununi Savannas), p. 271 (Cotinga River), 1876.

Carina moschata Cab. in Schomb. Reis. Guian. iii. p. 763, 1848.

Cairina moschata Salvin, Ibis, 1886, p. 173 (Yuruani River, 2700 ft., Roraima); Quelch, Tinnehri (2) ii. p. 363, 1888 (Abary River);

Salvad. Cat. B. Brit. Mus. xxvii. p. 51, 1895; Lloyd, Timehri (2) xi. p. 8, 1897; Beebe, Our Search for a Wilderness, p. 135, 1910 (Mora Passage), p. 357 (Abary River); Brabourne & Chubb, B. S. Amer. i. p. 54, no. 499, 1912.

"Miwah" (*C. A. Lloyd*); "Bisam or Turkish Duck" (*Schomburgk*).

Adult male. Back, wings, and tail dark glossy green; axillaries, upper and under wing-coverts pure white; bastard-wing dark green; top of head, neck all round, and entire underparts blackish brown. Bill varied with blackish and pinkish white, caruncles and naked parts on the head pinkish red; feet black.

Total length 758 mm., culmen 50, wing 383, tail 175, tarsus 63.

The male described was collected on the Abary River, in September 1907.

Adult female. Similar in colour of plumage to the adult male, but differs in the absence of the caruncles, and the naked space round the eye is very much restricted. It is also smaller in size. Wing 300 mm.

Nestling in down. Sooty-brown above with a white tuft on each side of the back and rump and a white bar across the wings; forehead and a line over the eye tawny-buff; under surface creamy-white; under wing and under tail-coverts white, as is also the inner portion of the thighs.

The nestling was collected on the Great Savannas.

Breeding-season. Unrecorded in British Guiana.

Nest. "Decaying Eta palms are the nesting-places of the Wild Muscovy Duck" (*C. A. Lloyd*).

Eggs. "Eight to ten in number" (*C. A. Lloyd*).

Range in British Guiana. Savannas, Abary River, Berbice River (*McConnell collection*); Cotinga River, Annai, Rupununi Savannas (*Brown*); Yuruani (2700 ft.), Roraima (*Whitely*); Mora passage, Abary River (*Beebe*).

Extralimital Range. South America generally to Argentina, Central America.

Habits. Schomburgk states (*Reis. Guian. iii. p. 763*) that he only found this species up to an altitude of 1500 feet. It is met with at the mouths of the oceanic rivers and also on the Savanna rivers and bogs. It is found in large flocks, singly, and in pairs. When flocks of these birds are startled, they divide, and fly in all

directions. The statement that the large flesh warts on the forehead of this bird give out a musk-smelling oil is not correct. I have obtained innumerable specimens for food, and have only been able to detect the slightest trace of a musk scent. This bird is known by the name *Bisam*—or *Turkish duck*. The “Macusis” call it *Mairva*, and the “Warraus” *Oumeh*.

Mr. C. A. Lloyd (Timehri (2) xi. p. 8):—makes the following remarks on this species:—“Decaying Eta palms are the nesting places of the wild Muscovy Duck, *Cairina moschata*, which the Indians call by the rather pretty name of ‘Miwah.’ This duck is notable for the great disparity in the size of the sexes, the male bird being often nearly double the bulk of his mate. The complement of eggs is stated to be from eight to ten. When the young ducks are hatched, the mother bird is said to convey them in her beak to the nearest water.”

We quote the following note from Mr. Beebe (Our Search for a Wilderness, p. 357):—“We now and then heard a louder whistle of wings, and a family flock of four or five great black Muscovy Ducks would rush past; the leader, the drake, being almost twice the size of the members of his harum.”

Genus **DENDROCYGNA** Swains.

Dendrocygna Swainson, Classif. Birds, ii. p. 365, 1837. Type *D. arcuata* (Horsf.).

The Tree Ducks are distinguished by their long necks, naked tibia, long tarsi, and the absence of transverse scutellæ on the lower front portion of the tarsi, which is reticulated. This genus is distributed in Africa, Asia, Australasia, Central and South America. Two species are represented in British Guiana.

Key to the Species.

- | | |
|---|------------------------------|
| A. Head, sides of face, chin, and middle of fore-neck white; nape, hind-neck, and middle of throat uniform deep black; breast deep chestnut; sides of abdomen barred with black and white | <i>D. viduata</i> , p. 189. |
| B. Head rusty brown; sides of face and throat dusky grey; a narrow line on the hind-neck blackish; breast grey with a rusty tinge; sides of abdomen uniform black | <i>D. discolor</i> , p. 190. |

118. *Dendrocygna viduata*.

WHITE-FACED DUCK.

Dendrocygna viduata (Linn.), Syst. Nat. i. p. 205, 1766 (Cartagena); Cab. in Schomb. Reis. Guian. iii. p. 762, 1848; Brown, Canoe and Camp Life, p. 105, 1876 (Annai); Salvin, Ibis, 1886, p. 172; Salvad. Cat. B. Brit. Mus. xxvii. p. 145, 1895 (Rupurumi River); Beebe, Our Search for a Wilderness, p. 355, 1910 (Abary River); Brabourne & Chubb, B. S. Amer. i. p. 54, no. 507, 1912.

?*Dendrocygna fulva* Beebe, Our Search for a Wilderness, p. 355, 1910 (Abary River).

“Wicissi Duck” (*Brown*).

Adult male. Fore part of head and lower throat white; nape, hind-neck, and a band across the throat black like the lower back, tail, primary and secondary quills, axillaries, under wing-coverts, abdomen, and under tail-coverts; sides of the body barred with black and white; mantle, lesser upper wing-coverts, and upper breast rich chestnut, becoming paler on the back, which is barred with dark brown, and buff on the scapulars; median wing-coverts and innermost secondaries bronze-brown.

Total length 365 mm., culmen 47, wing 212, tail 55, tarsus 50.

The description of the male is taken from a bird obtained on the Great Savannas in 1894.

Adult female. Is like the adult male in colour, but rather smaller. Wing 199 mm.

Breeding-season. Unknown in British Guiana.

Nest. “Supposed to nest on the edges of the bogs” (*Schomburgk*).

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Great Savannas (*McConnell collection*); Annai (*Whitely*); Rupununi River (*Brown*); Abary River (*Beebe*).

Extralimital Range. West India Islands, South America generally to Argentina.

Habits. Schomburgk remarks (Reis. Guian. i. p. 407):—The small vis-is-si ducks with their whistling call seemed bound to be close to us; as soon as we were discovered by them one of our native companions at once jumped into the water up to his neck from where he continued to send well-aimed arrows into the dense flocks of these ducks. If they were flying high and could see the arrow

coming, they at once opened out in all directions, and came into violent contact with each other, breaking their wings and stunning each other. He often saw five to eight ducks come down.

Schomburgk also states (Reis. Guian. iii. p. 762) that he never met this small interesting Duck on the coast but found it in enormous flocks on the Savanna bogs. He says that they were in small flocks on the rivers. Although so very common he did not find them breeding, but they were supposed to nest on the edges of the bogs. Their numbers were so great and dense that one shot sometimes brought down from ten to eighteen birds. When taken young it is easily tamed, and is commonly kept domesticated by the Indians. The flesh is very good. The "Macusis" call it *Wawing* and the "Warraus" *Vis-sisi*.

We have copied the following note from Mr. Barrington Brown (Canoe and Camp Life, p. 105):—"The pretty little Wicissi duck (*Dendrocygna viduata*) generally fly by night, when their presence is known by their whistle."

119. *Dendrocygna discolor*.

GREY-BREASTED TREE-DUCK.

Dendrocygna discolor Sclater & Salvin, Nomencl. Av. Neotr. pp. 129, 161, 1873 (Maroni River, Surinam); Salvin, Ibis, 1886, p. 172; Salvad. Cat. B. Brit. Mus. xxvii. p. 161, 1895 (Rupurumi River); Beebe, Our Search for a Wilderness, p. 355, 1910 (Abary River); Brabourne & Chubb, B. S. Amer. i. p. 55, no. 509, 1912.

Dendrocygna autumnalis (nec Linn.), Cab. in Schomb. Reis. Guian. iii. p. 762, 1848.

Adult male. Upper back, scapulars, and innermost secondaries chestnut; upper wing-coverts ochreous, the lesser series near the edge of the wing blackish, those on the outer margin of the wing inclining to grey; median series grey, the greater series white; bastard-wing, marginal coverts, and outer primary-coverts blackish; inner primary-coverts white; primary and secondary quills black with white on the outer webs towards the base except the two outer feathers, the first of which has the outer web entirely black and the second one grey; the second, third, fourth, and fifth primaries incised on the outer web and the first to the fourth on the inner web; crown of head and lower hind-neck pale chestnut, which is continued on to the fore-neck; nape and upper hind-neck

dark brown or blackish; mantle, sides of face, throat, and breast drab grey, most of the feathers having pale edges, which gives a wavy appearance; eyelids and a line of feathers below the eye white; lower back, tail, under wing-coverts, axillaries, sides of body, and abdomen uniform glossy black; lower portion of thighs and short under tail-coverts intermixed with white, the long under tail-coverts white with a few dark spots.

Total length 380 mm, culmen 54, wing 235, tail 70, tarsus 57, middle toe and claw 74.

The male and female from which the descriptions are taken were collected on the Pomeroon River.

Adult female. Similar to the adult male, but the colours not so bright. Wing 220 mm.

A young bird collected on the Abary River shows the outline of the plumage of the old bird on the upper surface in a subdued degree. The feathers generally have pale edgings and the tail-feathers margined with white. The abdomen is greyish brown intermixed with white, and the under tail-coverts are white with only a few very pale brown markings. The under wing-coverts are black with very narrow white edges.

Breeding-season. Unknown in British Guiana.

Nest. "On some low hummock in the marsh. They sleep and feed and nest among the thick growth of reeds and grass of the savanna itself" (*Beebe*).

Eggs. Undescribed from British Guiana.

Range in British Guiana. Pomeroon River, Abary River (*McConnell collection*); Rupununi River (*Whitely*); Abary River (*Beebe*).

Extralimital Range. Trinidad, Venezuela, Colombia, Ecuador, East Peru, Brazil.

Habits. Schomburgk writes (*Reis. Guian. iii. p. 762*) this beautiful Duck frequents the coast in small flocks, especially at the mouths of oceanic rivers. It is also found on some of the rivers such as the Barama, Barima, and Pomeroon. The full-grown individuals are only met with in pairs, and may often be seen perching on the branches of trees which have fallen into the water. Its whistle sounds like the word *vis-sisi* from which its name originated. It is supposed to nest on the borders of the rivers.

Mr. Beebe (*Our Search for a Wilderness, p. 357*) gives the

following note:—"In this region these birds are Tree-ducks only in name, as later in the year hundreds of eggs will be found scattered over the savanna, and sooner or later the flocks will dissolve into pairs, each to nest on some low hummock in the marsh. These ducks never settle on the open water of the river on account of the many dangers swimming beneath. They sleep and feed and nest among the thick growth of reeds and grass of the savanna itself."

Genus **ALOPOCHEN** Stejn.

Alopochen Stejneger, Stand. Nat. Hist. iv. Birds, p. 141, fig. 66, 1885.

Type *A. ægyptiacus* (Linn.).

This genus is characterized by having the distal portion of the tarsi in front transversely scutellated and the absence of prominent lamellæ on the edges of the bill. It has the rudiment of a blunt spur on the shoulder point of each wing.

120. *Alopochen jubata*.

SPIX'S GOOSE.

Alopochen jubata (Spix), Av. Bras. ii. p. 84, pl. cviii., 1825 ("ad ripam fl. Solimoëns in insula Praya das Onças"); Brabourne & Chubb, B. S. Amer. i. p. 55, no. 510, 1912.

Chenalopex jubatus Cab. in Schomb. Reis. Guian. iii. p. 762, 1848; Brown, Canoe and Camp Life, p. 265, 1876 (Takutu River); Salvin, Ibis, 1886, p. 172; Salvad. Cat. B. Brit. Mus. xxvii. p. 169, 1895.

"Orinoco Goose" (*Brown*).

Adult. Mantle and short scapulars chestnut, becoming buffy-white on the long scapulars, and dark brown on the inner webs of the latter; upper back dark brown with paler edges to the feathers; lesser and median wing-coverts dark bottle-green; greater series metallic green on the outer webs; bastard-wing and primary-coverts blackish with a greenish tinge and brown on the inner webs; second, third, and fourth primaries slightly incised on the outer web, and the first and second on the inner web; four of the inner secondaries have a large patch of white on the outer webs which forms a wing speculum; lower back, rump, upper tail-coverts, and tail dark bottle-green; head, throat, neck

all round, and breast, buffy-white, inclining to drab brown on the hinder part of the head, nuchal crest, and mane on the hind-neck; abdomen and sides of body chestnut; under tail-coverts white, axillaries and under wing-coverts dark bottle-green.

Total length 570 mm., culmen 43, wing 333, tail 113, tarsus 75, middle toe and claw 70.

This species is not represented in the McConnell collection, and the description is taken from a specimen in the British Museum.

According to Schomburgk (Reis. Guian. iii. p. 762) this bird occurs in pairs on the sand-dunes of the Lower Takutu River, but he was unable to discover its breeding-place.

Mr. Barrington Brown (Canoe and Camp Life, p. 265) writes:—"Upon the sand-beaches of the Takutu we saw numbers of Orinoco geese (*Chenalopea jubata*) being very tame from not being molested by the Indians, who do not consider their flesh a fit article for human food."

Genus **NETTION** Kaup.

Nettion Kaup, Skzz. Ent.-Gesch. Nat. Syst. p. 95, 1829. Type *N. crecca* (Jinn).

The members of this genus are small birds and have the innermost secondaries, or tertials straight, the bill of moderate size and, in *N. brasiliense*, the culmen about equal to the tarsus in length.

121. *Nettion brasiliense*.

BRAZILIAN TEAL.

Anas brasiliensis Gmel. Syst. Nat. i. p. 517, 1789 (Brazil).

Querquedula brasiliensis Cab. in Schomb. Reis. Guian. iii. p. 762, 1848.

Nettion brasiliense Salvad. Cat. B. Brit. Mus. xxvii. p. 266, 1895 (Aunai); Brabourne & Chubb, B. S. Amer. i. p. 56, no. 519, 1912.

Adult. Head blackish; hind-neck, upper back, scapulars, innermost secondaries, and upper tail-coverts earth-brown like the flanks and under tail-coverts; upper wing-coverts velvety black like the lower back and rump; primary-coverts and outer webs of primaries metallic green, the inner webs of the latter dark brown; outer webs of outer secondaries metallic green with a subapical black spot and tipped with white on both webs, the white increasing in extent on the inner ones, which are tinged with purple on the outer webs; tail-feathers black, some of them

tinged with metallic green ; forehead, sides of face, and throat dusky brown ; breast ferruginous ; abdomen greyish drab, some of the feathers barred with white and black ; some of the feathers on the sides of the body have ovate black spots ; axillaries pure white, under wing-coverts black tinged with green on the outer series, the greater series brown like the quill-lining.

Total length 380 mm., culmen 38, wing 190, tail 82, tarsus 34.

The bird described was collected at the Upper Takutu Mountains.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains (*McConnell collection*) ; Annai (*Whitely*).

Extralimital Range. South America generally.

Habits. According to Schomburgk (*Reis. Guian.* iii. p. 762) this species associates with *D. viduata* and is found in very large flocks on the Savanna bogs. As soon as they begin to fly the two species appear to separate. The "Macusis" call it *Ropprong*.

Genus **PÆCILONETTA** Eyton.

Pæcilonetta Eyton, *Monogr. Anat.* p. 33, 1838. Type *P. bahamensis* (Linn.).

This genus can be easily distinguished from the other genera that occur in British Guiana, by the long and pointed tail.

122. *Pæcilonetta bahamensis*.

BAHAMA PINTAIL.

Anas bahamensis Linn. *Syst. Nat.* 10th ed. i. p. 124, 1758 ("Habitat in Bahama").

Pæcilonetta bahamensis Salvad. *Cat. B. Brit Mus.* xxvii. p. 282, 1895 ; Brabourne & Chubb, *B. S. Amer.* i. p. 56, no. 522, 1912.

Dafila bahamensis Cab. in Schomb. *Reis. Guian.* iii. p. 763, 1848 ; Salvin, *Ibis*, 1886, p. 172.

Adult male. Head, hind-neck, mantle, fore-neck, breast, and abdomen rufescent with dark brown spots to the feathers, which are small on the head and neck and larger on the mantle and under surface ; back and scapulars black with cinnamon-buff

margins to the feathers ; lesser upper wing-coverts greyish brown, the median series and secondaries tipped with pale fawn-colour ; wing speculum bright green bordered with black ; upper and under tail-coverts pale fawn-colour ; tail dull white tinged with fawn-colour ; sides of face, throat, axillaries, and a portion of the under wing-coverts white, remainder of the last dark brown with paler margins, some of which are barred with white.

Total length 480 mm., culmen 42, wing 207, tail 101, tarsus 37.

Adult female. Similar to the adult male, but smaller and darker. Wing 195 mm.

The description of the male is taken from a specimen obtained on the Abary River in July 1906.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Abary River (*McConnell collection*).

Extralimital Range. South America generally (except Colombia, Venezuela, and Ecuador), and the Falkland Islands, Bahamas, and Antilles.

Habits. Schomburgk states (*Reis. Guian.* iii. p. 763) that he found this small Duck on the sand- and mud-banks at the mouths of the oceanic rivers, but did not observe it breeding.

Genus QUERQUEDULA Steph.

Querquedula Stephens, in Shaw's Gen. Zool. xii. pt. ii. p. 142, 1824.

Type *Q. querquedula* (Linn.).

This genus is distinguished from *Nettion* by the bluish-grey or blue upper wing-coverts.

123. *Querquedula discors*.

BLUE-WINGED TEAL.

Anas discors Linn. Syst. Nat. 12th ed. i. p. 205, 1766 (Virginia or Carolina).

Querquedula discors Salvad. Cat. B. Brit. Mus. xxvii. p. 299, 1895 ;

Brabourne & Chubb, B. S. Amer. i. p. 56, no. 525, 1912.

"Blue-winged Teal," Brown, 'Canoe and Camp Life,' pp. 137, 271, 1876 (Rupununi Savannas, Cotinga River).

Female (immature). Upper surface dark brown with paler brown edges to the feathers on the head, hind-neck, and upper back, and

white margins to those of the scapulars, lower back, tail, greater upper wing-coverts, and tips of secondaries; lesser upper wing-coverts pale blue; outer webs of secondaries dark green, but no speculum formed; base of forehead, sides of crown, sides of face, and fore-neck dull white with dark shaft-lines; throat uniform buffy-white; remainder of the under surface pale brown margined and irregularly marked with white; axillaries and median under wing-coverts white, marginal coverts brown edged with white, the greater series greyish like the quill-lining.

Total length 335 mm., culmen 37, wing 173, tail 65, tarsus 28.

The specimen from which the description is taken was procured on the Abary River in November 1906.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Abary River (*McConnell collection*); Rupununi Savannas and Cotinga River (*Brown*).

Extralimital Range. Colombia, Ecuador, Peru, West India Islands, Central and North America.

Habits. Unrecorded in British Guiana.

Genus **NOMONYX** Ridgw.

Nomonyx Ridgway, Proc. U.S. Nat. Mus. iii. p. 15, 1880. Type *N. dominicus* (Linn.).

This genus is distinguished by having the nail of the bill perpendicular, the tail longer than the tarsus, and the tail-feathers narrow and stiff.

124. **Nomonyx dominicus.**

WHITE-WINGED LAKE DUCK.

Anas dominica Linn. Syst. Nat. 12th ed. i. p. 201, 1766 ("Habitat in America meridionali").

Nomonyx dominicus Salvad. Cat. B. Brit. Mus. xxvii. p. 438, 1895; Brabourne & Chubb, B. S. Amer. i. p. 58, no. 535, 1912.

Adult male. Top of head, sides of face, and chin uniform black, or dark brown like the lesser upper wing-coverts, quills, and tail; remainder of the upper surface and sides of the body chestnut with dark centres to the feathers, being more uniform chestnut on the nape and throat; wing speculum white; under surface dull

white with brown centres to the feathers ; under tail-coverts tinged with chestnut ; under wing-coverts brown ; axillaries white.

Total length 330 mm., culmen 30, wing 142, tail 75, tarsus 25.

Adult female. Differs chiefly from the adult male in having the chin and throat uniform buffy-white, two lines on the sides of the face also buffy-white, and the upper surface barred with the same colour. Wing 135 mm.

The male and female described were obtained on the Kamuni River.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Kamuni River (*McConnell collection*).

Extralimital Range. South America generally, West India Islands, Central and North America.

Habits. Unrecorded.

Order PELECANIFORMES.

Family PHALACROCORACIDÆ.

The Cormorants are rather large birds with fairly long bills sharply hooked at the tip, long and stiff tail-feathers, short legs, and fully webbed feet, all four toes being connected by webs.

They are distributed on all the coast regions and tidal rivers throughout the known world, as well as on some of the inland lakes.

The family consists of about fifty species, six of which are known to occur in South America, one being represented in British Guiana.

Genus PHALACROCORAX Briss.

Phalacrocorax Brisson, Orn. v. p. 511, 1760. Type *P. carbo* (Linn.).

There is but one species of this genus known to occur in British Guiana to which the characters under the family fully apply. The members of the genus, however, can always be distinguished from the following genus, *Anhinga*, by the hooked bill and rounded scapular feathers.

125. *Phalacrocorax vigua*.

BRAZILIAN CORMORANT.

Phalacrocorax vigua Vieill. N. Dict. d'Hist. Nat. viii. p. 90, 1817 (Paraguay); Ogilvie-Grant, Cat. B. Brit. Mus. xxvi. p. 378, 1898 (Camacusa); Beebe, Our Search for a Wilderness, p. 218, 1910 (Barima River), p. 275 (Aremu River), p. 354 (Abary Savannas).

Halieus brasilianus Cab. in Schomb. Reis. Guian. iii. p. 764, 1848.

Phalacrocorax brasilianus Salvin, Ibis, 1886, p. 168 (Camacusa).

Adult (in non-breeding plumage). Upper surface, sides of the body, under tail-coverts, and under wing-coverts black; the feathers of the upper back and wings are frosted with grey and have brown margins; sides of face and fore-neck pale brown becoming darker and more smoky-brown on the breast and abdomen.

Total length 640 mm., culmen 49, wing 267, tail 161, tarsus 51.

The bird from which the description is taken was obtained on the Supenaam River in March 1910.

Breeding-season. Unknown in British Guiana.

Nest. "They are supposed to nest in trees" (*Schomburgk*).

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Supenaam River, Bonasika River (*McConnell collection*); Barima River, Aremu River, Abary Savannas (*Beebe*); Kamakusa (*Whitely*).

Extralimital Range. South America generally. Central America to Texas.

Habits. Schomburgk states (Reis. Guian. iii. p. 764) that this bird is more commonly found near the cataracts formed by the rivers, than on the coast. It is generally found sitting on the granite blocks in small companies, or resting on trees growing near the banks of the river. It finds it difficult to take flight from the rocks; when alarmed it throws itself towards the surface of the water, and uses its wings and feet for some distance, before being able to fly properly. The flesh of this bird is very fat, and is so fishy that it is unfit for food. It is an expert diver; when shot and not mortally wounded, it usually escapes by diving. It is supposed to nest in trees. The "Macusis" call it *Pareka*.

Family ANHINGIDÆ.

The Darters are more slender in form than the Cormorants, with long and pointed bills, very long and thin necks, long tails, short legs, and fully webbed feet.

The family is comprised of four species which are distributed in Africa, Asia, New Guinea, Australia, North, Central, and South America.

Genus ANHINGA Briss.

Anhinga Brisson, Orn. vi. p. 476, 1760. Type *A. anhinga* (Linn.).

This genus is easily distinguished from *Phalacrocorax* by the long and pointed bill, the long thin neck, the long lanceolated scapular feathers, and the rippings on the tail-feathers and scapulars.

126. *Anhinga anhinga*.

AMERICAN DARTER.

Plotus anhinga Linn. Syst. Nat. 12th ed. i. p. 218, 1766 ("Habitat in America australi"); Cab. in Schomb. Reis. Guian. iii. p. 764, 1848; Salvin, Ibis, 1886, p. 169; Quelch, Timehri (2) ii. p. 373, 1888 (Abary River); Ogilvie-Grant, Cat. B. Brit. Mus. xxvi. p. 419, 1898 (Rupununi River, Georgetown, Essequibo River).

Plotius anhinga Brown, Canoe and Camp Life, p. 47, 1876 (Cartoonie River).

Anhinga anhinga Beebe, Our Search for a Wilderness, p. 137, 1910 (Barima), p. 251 (Cuyuni), p. 354 (Abary River); Brabourne & Chubb, B. S. Amer. i. p. 60, no. 554, 1912.

"Diver or Duchlar" (Quelch); "Snakebirds" (Beebe).

Adult male. General colour above and below glossy black, spotted and streaked with silvery white on the mantle, scapulars, and wings; tip of tail smoky-white; with elongated hair-like feathers on the nape and upper hind-neck; throat and fore-neck brown more or less speckled with white.

Total length 980 mm., culmen 96, wings 337, tail 250, tarsus 39.

We do not know the exact locality of the male described.

Adult female. Differs from the adult male in having the throat and fore-neck whitish brown, the breast rufous buff, and a chestnut band skirting the black on the abdomen; head and hind-neck pale brown; mantle more or less grey. Wing 340 mm.

The female described was obtained on the Ituribisi River in February 1907.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Abary River, Arawai River (*McConnell collection*); Georgetown, Essequibo (*Quelch*); Rupununi River (*Whitely*); Cartoonie River (*Brown*); Barima River, Cuyuni River, Abary River (*Beebe*).

Extralimital Range. Colombia, Ecuador, Brazil to Rio Parana, Central America to the Southern United States.

Habits. Schomburgk states (*Reis. Guian.* iii. p. 764) that he found this bird on the banks of the rivers and creeks; also near the cataracts. He met with it at an altitude of 1200 feet, generally singly, sometimes in pairs, and more rarely in small flocks. When it is not feeding, it rests on the outermost branches of the trees on the river-bank and is thus enabled to survey the whole river. At the slightest movement in the proximity it stretches out its long neck, and if not re-assured it flies off; it is difficult, therefore, to obtain specimens. It is equally unapproachable when in the water, being a good swimmer and an expert diver—in fact, when swimming its small head only is seen above the surface of the water. If wounded by a shot when sitting on a branch, or taken by surprise, it does not fly away, but immediately dives perpendicularly into the water, and remains there from ten to twelve minutes; when rising to the surface for air it puts only its bill and nostrils above the water and returns again below the surface and thus evade its pursuers. Its flesh is rank and unedible. Schomburgk did not find it nesting. The “Macusis” call it *Kuyawick* and the “Warrans” *Mojoh*.

Mr. J. J. Quelch met with this bird on the Abary River and remarks (*Timelhi* (2) ii. p. 373) that the Diver or Ducklar (*Plotus anatina*) at times travelled along the Creek, but well ahead of the boat.

We quote the following note from Mr. Beebe (*Our Search for a Wilderness*, p. 251):—“Snakebirds were perched in solitary state at frequent intervals along the banks, silent, sinister-looking, craning their necks out at us, and either dropping quietly into the water and sinking from view or flapping heavily upward. Ordinarily their flight is very Pelican-like; six or eight flaps, then a

short scale, but when they once reach a high altitude, they soar most gracefully with set wings, first in a wide, slow circle, then with a sudden straight rush, then a circle and so on, all apparently without a single wing-beat. When thus high up in the air they have a most peculiar arrow-shaped appearance: thin sharp beak, slender neck and body, and broad, fan-shaped tail."

Family SULIDÆ.

The Gannets are rather large birds with conical bills which taper towards the tip, but no hook, the wings are long and Swallow-like in form, the tail is long and wedge-shaped, the legs short, and the feet fully webbed, all four toes being connected and the outer one the longest.

Their distribution is chiefly, on the coasts of the temperate and tropical seas of both hemispheres.

About nine species comprise the family, five occurring within the confines of South America, one of which is represented in British Guiana.

Genus SULA Briss.

Sula Brisson, Orn. vi. p. 494, 1760. Type *S. leucogaster* (Bodd.).

The members of this genus are distinguished chiefly by their pointed bills, hidden nostrils, and wedge-shaped tails.

127. *Sula leucogaster*.

WHITE-BELLIED BOOBY.

Pelecanus leucogaster Bodd. Tabl. Pl. Enl. p. 57, 1783 (Cayenne).

Sula sula Ogilvie-Grant, Cat. B. Brit. Mus. xxvi. p. 436, 1898.

Sula leucogaster Brabourne & Chubb, B. S. Amer. i. p. 60, no. 559, 1912.

Immature. General colour above and below smoky-brown, somewhat paler on the axillaries and abdomen.

Total length 620 mm., culmen 97, wing 395, tail 158, tarsus 46.

We do not know the exact locality of the bird described.

Adult male. Back, wings, and tail smoke-brown; head, throat, and neck all round darker and more chocolate-brown; under wing-coverts, sides of breast, lower flanks, and lateral under tail-coverts like the back; breast, abdomen, sides of body, axillaries,

and central under tail-coverts pure white. "Tarsi and webs bright chrome-yellow, under surface of webs greenish yellow; iris pure green; gular sac bright chrome-yellow; tarsi yellow shading into bluish grey" (*P. R. Lowe*).

Total length 620 mm., culmen 93, wing 375, tail 201, tarsus 41, middle toe and claw 76.

Adult female. Similar to the adult male. Wing 390 mm.

The male described is in the British Museum and was collected at Los Hermanos Island, Caribbean Sea, by Dr. P. R. Lowe on the 1st of February, 1907.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Georgetown (*Quelch*).

Extralimital Range. Eastern Coasts of South America to the Straits of Magellan. Tropical and sub-tropical seas of the world.

Mr. J. J. Quelch (*Timehri* (2) v. p. 107) records this species at Georgetown.

Family FREGATIDÆ.

The Frigate birds are essentially sea-birds, and can always be distinguished by their long and pointed wings, the large pouch, which is attached to the throat of the breeding male only, the long and deeply forked tail, the short and feathered legs, and the long middle toe, all the toes being webbed.

Genus FREGATA Lacep.

Fregata (Lacépède, *Tall. Ois.* p. 15, 1799). Daudin, in *Hist. Nat.* (Buffon), ed. Didot, *Quadr.* vol. xiv. p. 317, 1802. Type *F. minor* (Gmel.).

The characters which distinguish this genus are the same as those mentioned under the family.

128. *Fregata minor*.

FRIGATE BIRD.

Pelecanus minor Gmel. *Syst. Nat.* i. p. 572, 1789 (West Indies).

Tachypetes aquila Cab. in *Schemb. Reis. Guian.* iii. p. 763, 1848.

Fregata aquila (nec Linn.), Salvin, *Ibis*, 1886, p. 168; Ogilvie-Grant.

Cat. B. Brit. Mus. xxvi. p. 443, 1898; Beebe, *Our Search for a Wilderness*, p. 234, 1910 (Marooka); Brabourne & Chubb, B. S. Amer. i. p. 60, no. 560, 1912.

Adult. Entire plumage above and below black.

Total length 870 mm., culmen 109, wing 609, tail 395, tarsus 19, middle toe and claw 67.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Pomeroon River (Beebe).

Extralimital Range. Tropical and sub-tropical seas.

Habits. Schomburgk remarks (Reis. Guian. ii. p. 457) that at dusk hundreds of these birds passed over the sand-banks, but always out of shot. It is a glorious sight to see this beautiful bird hovering for minutes against the strongest storm, and then all of a sudden, dart like an arrow into the water after a fish. As it came every evening over the same sand-banks, he was convinced that it roosted in the woods a little way inland. This conclusion is more than probable, as there are no rocky islands off British Guiana.

Schomburgk also states (Reis. Guian. iii. p. 763) that this bird occurred at irregular intervals on the coast, but did not breed in the Colony.

Family PELECANIDÆ.

The Pelicans are large birds with very long bills and large pouches attached to the lower mandibles, big bodies, short tails, short legs, and rather long and fully webbed toes. There are about ten species, which are distributed in Europe, Africa, Asia, Australia, North, Central, and South America, and the Galapagos Islands, as well as the West India Islands.

Two species occur in South America, one of which is represented in British Guiana.

Genus PELECANUS Linn.

Pelecanus Linné, Syst. Nat. 10th ed. i. p. 132, 1758. Type *P. enseretolus* Linn.

The Pelicans can always be distinguished from all other birds by their long and hooked bills and very large gular pouches.

In *P. occidentalis* the bill is rather more than twice the length of the tail, and the middle toe and claw is longer than the tarsus.

129. *Pelecanus occidentalis*.

BROWN PELICAN.

Pelecanus occidentalis Linn. Syst. Nat. 12th ed. i. p. 215, 1766 (Guiana); Brabourne & Chubb. B. S. Amer. i. p. 61. no. 563, 1912. *Pelecanus fuscus* Cab. in Schomb. Reis. Guian. iii. p. 764, 1848; Salvin, Ibis. 1886. p. 168; Ogilvie-Grant, Cat. B. Brit. Mus. xxvi. p. 475, 1898 (British Guiana).

Adult. Back, wings, and tail hoary-grey, the feathers of the back broadly fringed with dark brown, or black, as is also the upper wing-coverts along the edge of the wing; tail-feathers blackish along the shaft like the inner primary and secondary quills, outer primaries black at the tips, becoming grey on both webs on the basal portion, where the shafts are white; head and a line down each side of the neck white; nuchal crest, hind-neck, and lower fore-neck rich sable-brown; under surface blackish with pale shaft-lines to the feathers, which are much broader and whiter on the sides of the body and axillaries; some of the under tail-coverts dull white; under wing-coverts brown with white shaft-lines.

Total length about 1100 mm., culmen 280, wing 490, tail 134, tarsus 67, middle toe and claw 109.

The adult male and female are, according to Mr. Ogilvie-Grant in the 'Catalogue of the Birds in the British Museum,' xxvi. p. 475, alike, but the female rather smaller. ♂ wing 558 mm., ♀ 508.

This species is not represented in the McConnell collection, and the description is taken from an example in the British Museum.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. "Occurs along the coast" (*Schomburgk*).

Extralimital Range. Venezuela, Central America, Islands of the Gulf of Mexico and Caribbean Sea, and the Southern States of North America.

Habits. According to Schomburgk (*Reis. Guian. iii. p. 764*) this bird occurs here and there along the coast, but does not breed in the Colony.

Order CATHARTIFORMES.

Family CATHARTIDÆ.

The Vultures are very large birds with unfeathered heads and necks, bare legs and feet. The tarsi and toes are covered with small reticulations. The toes are flat and the claws short and smooth.

They are distributed in Europe, Africa, Asia, and America. Four genera are represented in South America, three of which occur in British Guiana.



Sarcoramphus papa.

Fig. 49.—To show the fleshy caruncle at the base of the bill and the skin-folds on the hinder part of the head.

We wish to draw attention to the fact that Brabourne and Chubb, in their 'List of the Birds of South America,' used *Sarcoramphus* Dumeril for *graculus* (Linn.). The International Committee of Zoological Nomenclature have decided, however,

that the type of *Vultur* Linné, Syst. Nat. 10th ed. i. p. 86, 1758, is *gryphus*. The following correction therefore must be made, viz., *Vultur* will replace *Sarcorhamphus* genus 189 in Brabourne and Chubb's List and *Sarcoramphus* must be used in place of *Gypagus*.

Genus **SARCORAMPHUS** Dum.

Sarcoramphus Dumeril, Zool. Anal. 1806, p. 32, Type *S. papa* (Linn.).

This genus is distinguished chiefly by the fleshy caruncle at the base of the upper mandible.



Fig. 50.—To show the small foot and the fine reticulations on the tarsus.

130. **Sarcoramphus papa.**

Vultur papa Linn. Syst. Nat. 10th ed. i. p. 86, 1758 (Brazil).

Sarcorhamphus papa Cab. in Schomb. Reis. Guian. iii. p. 743, 1848.

Cathartes papa Sharpe, Cat. B. Brit. Mus. i. p. 22, 1874 (British Guiana).

Sarcoramphus papa Brown, Canoe and Camp Life, p. 177. 1876 (Siparuni River).

Gypagus papa Salvin, Ibis, 1886. p. 78; Quelch, Timelhi (2), iv. p. 327,

1890 (Berbice); Beebe, *Our Search for a Wilderness*, p. 137, 1912 (Barima); Brabourne & Chubb, *B. S. Amer.* i. p. 61, no. 566, 1912.

Adult male. Lesser upper wing-coverts pale yellow with a pinkish tinge; remainder of wings, lower back, and tail black; head and neck bare with sides of the face, top of head, and nape more or less covered with black hair; a collar of slate-grey feathers surrounds the lower neck; the remainder of the under-surface white, including the axillaries and under wing-coverts.

Total length 765 mm., culmen 32, wing 500, tail 220, tarsus 94, middle toe and claw 107.

The description is taken from a specimen collected on the Rupununi River, November 16, 1900.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Rupununi River, Great Savannas, Mazaruni River (*McConnell collection*); Berbice River (*Quelch*); Siparuni River (*Brown*); Barima River (*Beebe*).

Extralimital Range. Tropical South America and Central America to Mexico.

Habits. Schomburgk (*Reis. Guian.* ii. p. 500) writes:—I arrived at Kashwima Hill, where I saw some hundreds of Black Vultures resting on the trees. This surprised me, and I mentioned it to the natives, who at once informed me that there must be a carcass near on which the Woureaerepos (*Vultur papa*) must be feeding, as the Cathartes respectfully wait until the former are satisfied. Hearing this I at once decided to land for the sake of satisfying myself on this much disputed matter. Attracted by the stench of the carcass, which proved to be a Tiger-cat, we crawled to the spot. Six of these beautiful birds, three males and three females, were on the carcass. As soon as they discovered us they flew to the nearest tree. I was able from where I lay to shoot one of the males, but wounded it only. I took it into my boat. I may mention that in rising these Vultures make, probably with their wings, a most peculiar noise. When one of these birds has satisfied its hunger on a decomposed carcass it is impossible to go anywhere near it, owing to the unpleasant odours emitting from its mouth. I noticed that the wounded bird when close by my side, in the boat, smelt of musk. The beautiful colours of the soft parts fade away immediately after death. The report

of the gun had also roused all the other Vultures (*C. fœtens* and *C. aura*), which were now in company with the King Vultures over the place where the carcase lay, but the feast was too inviting for them to leave the spot, and after soaring about for some time at an immense height, they began, singly or in small parties, to descend by closing their wings and dropping with astounding pace like a stone through the air towards one of the trees, nearing which they spread out their strong wings and alighted with ease.

Mr. Barrington Brown (Canoe and Camp Life, p. 177) writes:—"King Vultures.—It is a well-known fact that where the carcase of a Comudi snake is, there will two King Vultures be gathered together."

Mr. Beebe (Our Search for a Wilderness, p. 137) observes:—"Our stereos showed a King Vulture circling slowly around, craning his wattled head down at us as he drifted past. We had never expected to see this bird near the coast, and indeed we saw no others during our entire stay in Guiana."

Genus **CORAGYPS** Bonap.

Coragyps Bonaparte, Rev. Zool. 1854, p. 530. Type *C. fœtens* (Wied).

In this monotypic genus the bill is rather long and depressed at the base, the nostrils are linear in shape and placed at the basal portion of the bill. The head and neck are naked and black with numerous corrugations or skin-folds, which are transverse on the nape and longitudinal on the throat. The tail is square.

Brabourne and Chubb, *tom. cit.*, used *Catharista* for *fœtens* Wied, but that name is an undoubted synonym of *Cathartes* Illiger, consequently we are using *Coragyps*.

131. *Coragyps fœtens*.

BLACK VULTURE.

Catharista fœtens Wied, Beitr. Naturg. Bras. iii. p. 58, 1830 (Brazil); Brabourne & Chubb, B. S. Amer. i. p. 62, no. 567, 1912.

Cathartes fœtens Cab. in Schomb. Reis. Guian. iii. p. 742, 1848; Brown, Canoe and Camp Life, p. 102, 1876.

Catharistes atratus Sharpe, Cat. B. Brit. Mus. i. p. 24, 1874.

Cathartes atratus Salvin, Ibis, 1886, p. 78; Quelch, Timehri (2) v. p. 103, 1891 (Georgetown); Lloyd Price, *tom. cit.* p. 65 (nesting-habits).

Catharista atrata Lloyd, Timehri (2) xi. p. 10, 1897 (habits).

Catharista urubu Beebe, Our Search for a Wilderness, pp. 112, 121, 1910 (Georgetown).

“Black-headed Turkey-Buzzard” (*Brown*).

Adult. General colour of the plumage both above and below dull black; shafts of primary-quills white, both above and below; quill-lining pale grey near the shafts, blackish on edge of inner webs and at the tips; under surface of tail black as above; shafts of tail-feathers black, both above and below, but inclining to white towards the base on the under surface. “Naked part of head blackish” (*Schomburgk*).

Total length 500 mm., culmen 59, wing 380, tail 170, tarsus 75, middle toe and claw 85.

The description is taken from an example obtained on the Abary River in September 1907.

The young, according to Mr. Lloyd Price, “are of a light bluish, or brownish grey colour.”

Breeding-season. Unknown in British Guiana.

Nest. “Often found on the trash banks, and near the roots of old stumps” (*Lloyd Price*).

Eggs. “Dirty white profusely spotted with dark brown and two in number” (*Lloyd Price*).

Range in British Guiana. Abary River (*McConnell collection*); Rupununi River (*Brown*); Georgetown (*Beebe, Quelch*).

Extralimital Range. The remaining portion of South America to the Rio Negro, Patagonia. Central and North America, Cuba and Jamaica.

Habits. The following notes have been translated from Schomburgk (Reis. Guian. i. p. 461), who remarks that cattle caught by the lasso are immediately killed when brought to the forts, and, scarcely before they are dead, Vultures (*Cathartes fætens* and *C. aura*)—called “Carriion Crows” by the settlers—come rushing hither from all quarters of the air: in fact, in less than one hour he counted 300–400 birds. To rid themselves of these unwelcomed guests, the officers of the fort loaded a cannon with rifle-balls, and one shot, when fired into a dense flock, killed from forty to fifty birds.

Owing to the contradictory statements, in different books, relating to the habits of these Vultures (*C. fætens* and *C. aura*), Schomburgk studied them rather carefully in regard to their

habits. He had often found it stated that these Vultures when not able to obtain carrion would attack live animals. During his four years' travel in British Guiana he had often for hours—even for days—watched these Vultures surrounded by snakes, lizards, mammals, and birds, but he *never* saw them attack either of them.

Even when a Steppe (Savannah) fire has attracted hundreds of birds of prey of all sorts, which prey on the living creatures fleeing before the fire, one never finds any Vultures among them. In parts of South America the Vultures are strictly protected; in British Guiana there is a fine of fifty dollars for killing one, the reason being that their scavenger habits are highly appreciated; in consequence of this they become extremely tame, and walk about in close proximity to dwellings. He had never seen or heard of them attacking or killing a chick or any other domesticated animal; whereas if any species of Hawk approaches the settlement or village, the natives, being very zealous about their fowls, raise a hue-and-cry to frighten the robber away. As mentioned above, the Vultures never go to a Savannah-fire when raging—whereas the day after they attend in enormous flocks on the burnt fields to feed on the animals which had been killed by the fire and which lay about in great numbers. This proves that the Vultures do not despise freshly killed animals for food. When in the town of Pirara pieces of fresh meat were given to them, which they swallowed with great eagerness. If there is sufficient food on a carcase, for the number of Vultures collected there, they gorge themselves to such a degree that they sit quite helpless on the ground. If you attack one in that state its usual method is to vomit its food before being able to make use of its powerful pinions.

When the Vultures have finished their feasting on a carcase the bones are so clean, and the joints being intact, it looks as though the most skilled articulator had excelled in his profession. By carefully watching these birds he came to the conclusion that they discover the carcasses by the use of their nostrils as well as their eyes, and they rarely, if ever, miss the place where the carrion lies.

Schomburgk did not find their nesting-places.

Mr. Barrington Brown (*Canoe and Camp Life*, p. 102) gives the following note:—"Black-headed Turkey-Buzzards wait patiently in large numbers near a camp to get any scraps and bones that may remain behind."

Mr. Lloyd Price (Timehri (2) v. p. 65) writes :—" In newly-cut cane-fields the common species of Black Vulture (*Cathartes atratus*) lays her two eggs, which are often found on the trash-banks, and near the roots of old stumps. The eggs are of a dirty white profusely spotted with dark brown. The young of this bird are seldom seen ; they are of a light bluish or brownish grey colour."

Mr. Quelch (Timehri (2) v. p. 103) observed this species at Georgetown, and remarks :—" The common Black-head or so-called Carrion Crow (*Cathartes atrata*) may be seen at almost any time, in the streets, on the coco-nut or other high trees, on the tops of the houses, or circling overhead."

Mr. C. A. Lloyd (Timehri (2) xi. p. 10, 1897) remarks on the habits of this species :—" During the breeding-season large numbers of young Egrets fall a prey to the black Carrion Vulture, *Catharista atrata*, which may be seen hovering around the breeding-grounds, on the look out for a chance to swoop down on some unguarded nest and carry off its contents. The old birds vigorously defend their nests against the attacks of the Vulture, but as the Scarlet Ibis appears on the scene, they immediately desert their charges and fly away."

Mr. Beebe (Our Search for a Wilderness, p. 121) observes :—" Just before dusk scores of the small Black Vultures appear, flying singly, or in twos and threes, low over the trees and palms westward to some general roost."

Genus **CATHARTES** Illig.

Cathartes Illiger, Prodr. Syst. Mamm. et Av. p. 236, 1811. Type *C. aura* (Linn.).

The members of this genus have shorter bills, not depressed at the base, the nostrils oval in shape and placed towards the tip of the bill. The head and neck, which are naked, are red, orange, or yellow in colour, without corrugations or skin-folds. The tail is rounded.

132. *Cathartes ruficollis*.

RED-NECKED TURKEY-VULTURE.

Cathartes ruficollis Spix, Av. Bras. i. p. 2, 1824 (Bahia).

Cathartes urubitinga Pelz. Sitzb. Ak. Wien, xlv. p. 7, 1861 (South and Central Brazil); Quelch, Timehri (2) iv. p. 114, 1890 (Demerara Falls); id. op. cit. v. p. 103, 1891 (Georgetown); Beebe, Our

- Search for a Wilderness, p. 321, 1910 (Aremu River), p. 383 (Abari River); Brabourne & Chubb, B. S. Amer. i. p. 62, no. 570, 1912.
- Cenops pernigra* Sharpe, Cat. B. Brit. Mus. i. p. 26, 1874 (North side of River Amazon).
- Catharista aura* (nec Linn.), Quelch, Timehri (2) ii. p. 363, 1888 (Abari River).
- Cathartes aura* (nec Linn.), Quelch, Timehri (2) v. p. 103, 1891 (Georgetown); id. op. cit. (2) vi. p. 120, 1892 (habits).
- Cathartes pernigra* Quelch, Timehri (2) v. p. 104, 1891 (Georgetown); Brabourne & Chubb, B. S. Amer. i. p. 62, no. 569, 1912.

“Governor Bird and King or Governor of the Carrion Crows; Red-headed Carrion Crow; Turkey-Buzzard; Yellow-headed Vulture; Red-headed Vulture” (Quelch).

We find it impossible to follow the characters, which Dr. Sharpe proposed in the ‘Catalogue of the Birds in the Collection of the British Museum,’ for the separation of the species of this genus.

Cathartes aura (Linn.) refers to the North American bird, the type locality being Mexico; *C. iota* Molina, from Chile, becomes available for the Chilian, Argentina, and Falkland Island form.

We are using *C. ruficollis* Spix for the Eastern South American form, which ranges from Bahia and Piahy to Guiana, and propose to add as synonyms, *C. urubitinga* Pelz. and *C. pernigra* Sharpe.

Adult. Glossy purplish black above and below; shafts of tail-feathers black above, straw-colour below; under surface of tail grey, with a yellowish tinge in some lights; shafts of primary-quills pale brown above, ivory-white below; greater under wing-coverts and quill-lining grey with yellowish reflections. Head yellow.

Total length 580 mm., culmen 48, wing 484 to 490, tail 240, tarsus 60, middle toe and claw 77.

The bird described was collected on the Ituribisi River.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River (McConnell collection).

Extralimital Range. Eastern Brazil.

Habits. Mr. J. J. Quelch remarks (Timehri (2) ii. p. 363) that this species, the Red-headed Carrion Crow, was plentiful on the Abari River.

Mr. Quelch observed this species at the Great Falls, Demerara River, and remarks (Timehri (2) iv. p. 114):—“The rare Yellow and Red-headed Vulture (*Cathartes urubitinga*) circled

high overhead. or rose, at times, from his feast on some putrescent matter by the waterside."

Mr. Quelch also observed it at Georgetown (Timehri (2) v. p. 103), and writes:—"Very frequently also, but seldom more than one at a time, the Red-headed Carrion Crow or Turkey-Buzzard (*Cathartis aura*) may be met with. These are much larger birds, about thirty inches in length, and are often referred to as Governor Bird, and King or Governor of the Carrion Crows."

On p. 104 he further remarks:—"It seems to me doubtful whether the Yellow-headed Vulture (*C. pernigra*), which is also occasionally seen, is specifically distinct from this form, even though its plumage is blacker and the shafts of the quills brown above."

Mr. Quelch also remarks on the food of this bird (Timehri (2) vi. p. 120):—"Masses of leaves were discovered in the body of some of the specimens of the Red-headed Vulture (*Cathartes aura*). Scarcity of Carrion Crows would be sufficient to explain the peculiarity in the case of the Vulture, though even then one would have imagined that fresh flesh would have been more acceptable than leaves."

Genus **POLYBORUS** Vieill.

Polyborus Vieillot, Anal. nouv. Orn. p. 22, 1816. Type *P. plancus* (Miller).

The members of this genus have the greater part of the face naked and the nostrils oval in shape. Outer and inner toe connected to the middle one by an interdigital membrane. Innermost primary much exceeded in length by the innermost secondaries.

133. *Polyborus cheriway*.

Falco cheriway Jacq. Beitr. p. 17. pl. 4. 1784 (Islands and Coast of Venezuela).

Polyborus cheriway Cab. in Schomb. Reis. Guian. iii. p. 741, 1848; Sharpe, Cat. B. Brit. Mus. i. p. 33, 1874 (British Guiana); Brown, Canoe and Camp Life, p. 167, 1876 (Quitaro River,); Salvin, Ibis, 1886, p. 78; Quelch, Timehri (2) vi. p. 126, 1892; Beebe, Our Search for a Wilderness. p. 131, 1910 (Georgetown); Brabourne & Chubb, B. S. Amer. i. p. 62, no. 573, 1912.

"Savanna Kites" (*Brown*).

Adult male. Crown of head, back, scapulars, wings, abdomen, sides of body, thighs, and under wing-coverts blackish brown, some

of the upper wing-coverts have whitish edgings; primary-quills and tail-feathers broadly barred with white; throat, sides of face, under tail-coverts, and basal portion of tail on the under surface buffy-white; hind-neck, mantle, fore-neck, and breast barred with black, or brown and white, or buffy-white.

Total length 485 mm., culmen 31, wing 381, tail 200, tarsus 94, middle toe and claw 68.

The male described was collected on the Abary River in November 1906.

The adult male and female appear to be very similar to each other in the colour of the plumage. As regards the measurements, there is much variation, as we have measured the wings of a considerable number of each sex and find that the females measure from 385 to 408 mm. and the males 368 to 395 mm.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Abary River (*McConnell collection*); Quitaro River (*Brown*); Georgetown (*Beebe*).

Extralimital Range. Trinidad, Venezuela, Colombia, Ecuador.

Habits. Schomburgk states (*Reis. Guian.* iii. p. 741) that this bird is very common on the Savannas, but unknown in the virgin forests near the coast. It is always found in large flocks running about on the dried up bogs. If Vultures have been attracted by a dead animal this species at once made an appearance and contested the prize with the Vultures. He was of opinion, however, that the principal food of this bird consisted of insects, molluscs, and reptiles. Although he had met with many hundreds, he never once saw a single individual chase a bird, but often saw a pair of them rest on a termite hill. Schomburgk did not find its nest. The "Paravilhanos" call it *Cara-carari*, the "Macusis" *Caracca*, and the "Warraus" *Tosorih*.

Mr. J. J. Quelch (*Timebri* (2) vi. p. 126) remarks that:—"These birds are not met with on the coast, being confined to the savannah and more open tracts of the interior. In their habits they are the most vulturine of the group."

Mr. Barrington Brown (*Canoe and Camp Life*, p. 167) gives the following notes:—"As we came along in one place the Indians set the dry savanna grass on fire, and as the low wall of flame

advanced before the wind, throwing up puffs of dark smoke, numbers of large Savanna Kites sprang up as if by magic, from low neighbouring trees, and hovered in advance of the line of fire, on the watch for snakes, mice, rats, lizards, etc., that were flying before the destructive flame. One of these birds dropped suddenly in the grass close to me, and as quickly rose again, with a rat in its talons, which it carried to a low tree, and then giving it a peck or two, swallowed it whole."

Genus **IBYCTER** Vieill.

Ibycter Vieillot, Anal. nouv. Orn. p. 22, 1816. Type *I. americanus* (Bodd.).

This genus differs from the preceding one in the shape of the bill, the position of the rounded nostrils, the bare throat, the innermost secondaries about equal in length to the innermost primary, and the comparatively longer tail.

134. *Ibycter ater*.

YELLOW-THROATED CARACARA.

Daptrius ater Vieill. Anal. nouv. Orn. pp. 22, 68, 1816 (Brazil); Cab. in Schomb. Reis. Guian. iii. p. 742, 1848.

Ibycter ater Sharpe, Cat. B. Brit. Mus. i. p. 35, 1874; Salvin, Ibis, 1886, p. 78; Brabourne & Chubb, B. S. Amer. i. p. 62, no. 574, 1912.

Adult male. General colour everywhere black, both above and below, except the base of the tail, which is white.

Total length 383 mm., culmen 29, wing 296, tail 180, tarsus 52, middle toe and claw 48.

Adult female. Similar to the adult male. Wing 308 mm.

The male described was collected at Bartica.

There are two specimens, apparently immature, one from the Kamakabra River and the other from the Ituribisi River, which have the under surface barred with buffy-white, white mottled patches on the primary-quills, and the greater portion of the tail broadly barred with white.

Breeding-season. Unknown in British Guiana.

Nest. "It nests on trees" (*Schomburgk*).

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Supenaam River, Bartica, Kamakabra River, Hoobaboo River, Cako River, Tiger Creek (*McConnell collection*).

Extralimital Range. Venezuela, Colombia, Ecuador, East Brazil.

Habits. According to Schomburgk (Reis. Guian. iii. p. 742) this bird lives in the oasis on the Savannas, but as soon as a volume of smoke is seen, which indicates a Savanna fire, it repairs towards it for the purpose of preying on the escaping reptiles. It nests on trees. The "Warraus" call it *Outuanaitye*.

Mr. J. J. Quelch remarks (Timehri (2) vi. p. 120) that the food of this species consists almost entirely of seeds, fruit, and young leaves.

135. *Ibycter americanus*.

RED-THROATED CARACARA.

Falco americanus Bodd. Tabl. Pl. Enl. p. 25, 1783 (Cayenne).

Ibycter aquilinus Cab. in Schomb. Reis. Guian. iii. p. 742, 1848.

Ibycter americanus Sharpe, Cat. B. Brit. Mus. i. p. 35, 1874; Salvin, Ibis, 1886, p. 77 (Bartica Grove, Camacusa); Quelch, Timehri (2) iv. p. 102, 1890 (Demerara Falls), p. 334 (Upper Berbice River), vi. p. 120, 1892; Brabourne & Chubb, B. S. Amer. i. p. 63, no. 575, 1912.

"Bush Carrion Crows" or "Bultata" (Quelch).

Adult. General colour black, except the lower abdomen, thighs, and under tail-coverts, which are white, the last more or less tinged with buff.

Total length 525 mm., culmen 33, wing 343, tail 240, tarsus 48, middle toe and claw 57.

The description is taken from an example collected on the Kamakabra River.

We have examined a series of specimens in the British Museum and find that the adult male and female are similar both in the colour of the plumage and in the measurements.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Bartica, Kamakabra River, Cako River, Demerara River (*McConnell collection*); Bartica, Kamakusa (*Whitely*).

Extralimital Range. Trinidad, Colombia, Ecuador, Eastern Peru, Brazil.

Habits. According to Schomburgk (Reis. Guian. iii. p. 742) this peculiar bird is very common in British Guiana and generally distriouted. It is usually found in flocks. He discovered that its food consisted chiefly of berries by the fact of a wounded individual having fallen from a tree and disgorged a number of red

fruits, which proved to be a species of *Malpighia*. Schomburgk dissected many others, and always found the remains of fruits in their stomachs. He was of opinion, however, that it varied its diet with insects and reptiles. The "Warraus" call this bird *Yacka tatta* and the "Macusis" *Calau-Calau*.

Mr. J. J. Quelch (Timehri (2) iv. p. 102) observed this species on the Great Falls, Demerara River, and writes:—"The so-called Bush Carrion Crows or Bultata (*Ibycter americanus*), which were constantly to be heard hoarsely and discordantly cawing in the high tree tops." He also states (*t. c.* p. 334) that he met with the species on the Upper Berbice River. He likewise remarked (*op. cit.* vi. p. 120) that its food consisted almost entirely of seeds, fruit, and young leaves.

Genus **MILVAGO** Spix.

Milvago Spix, Aves Brasil. i. p. 12, 1824. Type *M. chimachima* (Vieill.).

This genus is distinguished from the preceding by the feathered throat.

136. *Milvago chimachima*.

YELLOW-HEADED CARACARA.

Polyborus chimachima Vieill. N. Dict. d'Hist. Nat. v. p. 259, 1816 (Paraguay).

Milvago chimachima Cab. in Schomb. Reis. Guian. iii. p. 741, 1848; Salvin, Ibis, 1886, p. 78 (Merumé Mts.); Quelch, Timehri (2) vi. p. 125, 1892; Brabourne & Chubb, B. S. Amer. i. p. 63, no. 580, 1912.

Ibycter chimachima Sharpe, Cat. B. Brit. Mus. i. p. 39, 1874.

"White-headed Caracaras" (Quelch).

Adult male. Head and entire under surface, including the axillaries and under wing-coverts, creamy-white; a line behind the eye, back, and wings dark brown; the primaries barred and mottled with buffy-white on the basal portion; upper tail-coverts buffy-white, the short central ones barred with brown; tail dark brown or blackish, broadly barred on the basal portion and edged with buffy-white.

Total length 360 mm., culmen 23, wing 280, tail 178, tarsus 51, middle toe and claw 45.

Adult female. Like the adult male in plumage, but larger in size. Wing 300 mm.

The male described was collected on the Anarica River.

Breeding-season. Unknown in British Guiana.

Nest. "Supposed to nest in trees" (*Schomburgk*).

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Ituribisi River, Bonasika River, Abary River, Anarica River, Essequibo River (*McConnell collection*); Merumé Mountains (*Whitely*).

Extralimital Range. Venezuela, Colombia, Brazil, Paraguay, Uruguay.

Habits. Schomburgk states (*Reis. Guian.* iii. p. 741) that this bird is only found on the Savannas. Its habits are the same as those of *Ibycter americana*. It is supposed to nest in trees. The "Macusis" and "Arekunas" call it *Wokira*.

Mr. J. J. Quelch (*Timehri* (2) vi. pp. 125, 126) remarks that this species is common, especially in the partially cleared lands on the coast, and along the bushy tracts on such savannah creeks as the Abary, are the Chimachimas or White-headed Caracaras (*Milvago chimachima*). These birds are sometimes seen in the pastures on the cattle, which they frequent for ticks and insects, or on the ground or bushes, where they seek out insects and small reptiles. Often they occur in large flocks, though the individuals of such groups generally perch at some distance apart.

Genus **CIRCUS** Lacep.

Circus Lacepède, *Tableau Oiseaux*, p. 4, 1799. Type *C. æruginosus* (Linn.).

The Harriers belong to the group of long-legged Hawks, and are distinguished chiefly by their facial disc and the oval nostrils.

They are distributed in Europe, Africa, Asia, Australasia, North, Central, and South America. There are about fifteen species, three of which occur in South America, one being represented in British Guiana.

137. *Circus buffoni*.

LONG-WINGED HARRIER.

Falco buffoni Gmel. *Syst. Nat.* i. p. 277, 1788 (Cayenne).

Circus maculosus Sharpe, *Cat. B. Brit. Mus.* i. p. 62, 1874; Quelch, *Timehri* (2) vi. p. 145, 1892.

Circus buffoni Brabourne & Chubb, *B. S. Amer.* i. p. 64, no. 584, 1912.

"Spotted Harrier," "Snake-Hawk" (*Quelch*).

Adult male. Back, head, and neck all round black; wings and tail broadly barred with black and ash-grey; forehead, eyebrows, and under surface white with a few dark spear-shaped marks on the last; the feathers of the throat more or less marked with white; axillaries and under wing-coverts white barred with dark brown, the white becoming buff on the major coverts and base of the quills.

Total length 435 mm., culmen 31, wing 378, tail 210, tarsus 77, middle toe and claw 52.

Adult female. Similar to the adult male.

The male described was obtained on the Abary River in September 1907. Another, a fully adult bird, from the Abary is entirely black below, including the axillaries and under wing-coverts.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Abary River (*McConnell collection*).

Extralimital Range. Venezuela and Trinidad to the Straits of Magellan.

Habits. We quote the following notes from the writings of Mr. J. J. Quelch (Timehri (2) vi. p. 145):—"The Spotted Harrier (*Circus maculosus*). This is one of the commonest of the coast birds, being found along all the lower or tidal parts of the main creeks, where it can be readily distinguished, when perching, by its long wings, legs, and tail; but it is much more easily recognised in flight by the spread of its wings and tail, on which the numerous black and grey bars are very conspicuous. It commonly goes by the name of 'Snake-Hawk,' and is always very abundant among the bushy tree-growths along the savannah streams and by swampy places, where it may pick up snakes, lizards, and frogs. It is particularly abundant on the Abary, and is frequently met with in the Mahaicony and the Hoobaboo and other creeks. Occasionally it will be encountered perched on a tree, tearing to pieces some unfortunate bird, such as the awkward and slow-flying Old Witch or Ani Cuckoo (*Crotophaga ani*), the poor victim meantime crying out for dear life. They seem to congregate in small flocks of five or six, though it is not uncommon to come upon them singly, or in much larger flocks, especially in the wet weather, when they gather around the little

bushy islands left in the open savannahs by the high water, to which the various animals on which they feed have been driven for shelter. They are graceful looking birds while on the wing, but they alight in a very awkward manner, their wings and tail being more or less expanded at first to prevent them from overbalancing as they settle on the branch. This is the first record of the species from the Colony."

Genus **MICRASTUR** Gray.

Micrastur Gray. List Genera of Birds, 2nd ed. p. 6, 1841. Type *M. brachypterus* (Temm.).

This genus is differentiated from *Circus* by its rounded nostril, shorter and stouter bill, much shorter and more rounded wing, and the very long tail.



Fig. 51.—To show the absence of any tooth on the lower edge of the upper mandible.

Key to the Species.

- A. Larger, wing more than 200 mm.
 - a'. Above black with a white collar on the hind-neck *M. brachypterus*, p. 221.
 - b'. Above uniform slate-grey, no collar on the hind-neck *M. mirandollei*, p. 221.
- B. Smaller, wing less than 200 mm.
 - c'. Larger, wing more than 185 mm.; abdomen white sparsely banded with brown. ♀ *M. gilvicollis*, p. 222.
 - d'. Smaller, wing less than 185 mm.; abdomen numerously banded with blackish brown. ♀ *M. interstes*, p. 223.

138. *Micrastur brachypterus*.

PIED HAWK.

Falco brachypterus Temm. Pl. Col. pls. 116, 141, 1822 (Guiana, Brazil, Paraguay).

Micrastur semitorquatus Sharpe, Cat. B. Brit. Mus. i. p. 75, 1874; Salvin, Ibis, 1886, p. 75 (Roraima, 3500 ft.); Quelch, Timehri (2) vi. p. 144, 1892.

Micrastur brachypterus Brabourne & Chubb, B. S. Amer. i. p. 64, no. 585, 1912.

Adult male. Upper surface black barred with white on the inner webs of the primary and secondary quills; tail black, banded and tipped with white; under surface and a collar round the hind-neck white tinged with buff, the feathers showing dark shaft-lines; under wing-coverts white spotted with brown.

Total length 500 mm., culmen 28, wing 264, tail 233, tarsus 86, middle toe and claw 57.

The description of the male is taken from an example collected at Bartica.

Adult female. Similar to the adult male. Wing 277 mm.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Bartica (*McConnell collection*); Mount Roraima, 3500 ft. (*Whitely*).

Extralimital Range. South America generally from Colombia to South Brazil and Paraguay.

Habits. Mr. J. J. Quelch (Timehri (2) vi. p. 144) gives the following note:—"The Long-tailed or Collared Harrier-Hawk (*Micrastur semitorquatus*). These birds frequent the wooded districts, and are to be obtained in the open parts along the creeks and great rivers. They are not commonly met with on the coast."

139. *Micrastur mirandollei*.

MIRANDOLLE'S HAWK.

Astur mirandollei Schl. Ned. Tijdschr. i. p. 131, 1863 (Dutch Guiana).

Micrastur mirandollei Sharpe, Cat. B. Brit. Mus. i. p. 76, 1874; Salvin, Ibis, 1886, p. 501 (Carimang River); Quelch, Timehri (2) vi. p. 144, 1892; Brabourne & Chubb, B. S. Amer. i. p. 34, no. 586, 1912.

"White-breasted Harrier-Hawk" (*Quelch*).

Adult male. General colour above grey, becoming darker and

inclining to black on the head; tail dark brown, largely notched with white on the inner webs of the feathers, also edged with white at the tips, and an indication of two pale brown bars on the upper aspect; inner webs of primary and secondary quills broadly barred with white: entire under surface buffy- or creamy-white, with dark narrow shaft-lines.

Total length 430 mm., culmen 20, wing 224, tail 184, tarsus 70, middle toe and claw 52.

We do not know the exact locality in the Colony of the male from which the description is taken.

Adult female. Similar to the adult male. Wing 233 mm.

Immature birds appear to have the feathers of the breast and sides of the body fringed with pale brown and the dark shaft-lines more strongly pronounced.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Bartica, Arawai River (*McConnell collection*); Kamarang River (*Whitely*).

Extralimital Range. Eastern Peru.

Habits. Mr. J. J. Quelch (*Timehri* (2) vi. p. 144) gives the following remarks:—"The White-breasted Harrier-Hawk (*Micrastur mirandollei*). This species does not appear to occur on the coast. This is the first record of the bird from the Colony."

140. *Micrastur gilvicollis*.

LINED HAWK.

Sparrius gilvicollis Vicill. N. Dict. d'Hist. Nat. x. p. 323, 1817 (Cayenne).

Climacocercus concentricus Cab. in Schomb. Reis. Guian. iii. p. 738, 1848.

Micrastur gilvicollis Sharpe, Cat. B. Brit. Mus. i. p. 78, 1874; Salvin, Ibis, 1886, p. 75 (Camacusa, Bartica Grove); Quelch, *Timehri* (2) v. p. 105, 1891 (Georgetown); id. op. cit. vi. p. 143, 1892; Brabourne & Chubb, B. S. Amer. i. p. 64, no. 588, 1912.

"Black-barred Harrier-Hawk," "Chicken-Hawk" (*Quelch*).

Adult male. Dark slate colour above with white bars on the inner webs of the primary and secondary quills; tail dark brown, inclining to black on the middle feathers, with two white bands and white, or buffy-white tips; sides of face somewhat paler grey than the back; throat white with a slight tinge of grey; breast, abdomen, and sides of body barred with slate-brown and white; vent and under tail-coverts uniform creamy-white; axillaries

barred with white ; inner under wing-coverts white. "Bill slate-colour with yellow ochre at base ; cere, legs, and toes orange ; claws brown" (*H. Whitely*).

Total length 305 mm., culmen 17, wing 185, tail 149, tarsus 64, middle toe and claw 31.

The description of the male is taken from an example obtained on the Ituribisi River.

Adult female. Similar to the adult male. Wing 198 mm. "Bill, upper mandible bluish-black, lower mandible greenish-yellow ; cere blood orange-colour ; legs and toes yellow, claws horn-colour ; iris white" (*H. Whitely*).

There is considerable variation in the barring on the under surface in this species, while some are almost uniform creamy-white others are very numerously barred ; this may, however, be accounted for by age.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Supenaam River, Berbice, Tiger Creek (*McConnell collection*) ; Kamakusa, Bartica (*Whitely*).

Extralimital Range. Brazil, Eastern Peru, Colombia.

Habits. Schomburgk says (*Reis. Guian. iii. p. 738*) that this bird is called *Ohto* by the "Warraus" and *Mapillo* by the "Macusis."

Mr. J. J. Quelch (*Timehri* (2) vi. p. 143) gives the following remarks on this species :—"The Black-barred Harrier-Hawk (*Micrastur gilricollis*). This is a very widely distributed species, being commonly found on the coast, and in the immediate neighbourhood of the town, as well as in the interior parts of the colony, along the sheltered creeks and by the open savannahs. It is one of the species that commonly goes by the name of Chicken-Hawk."

141. *Micrastur interstes*.

CASSIN'S BARRED HAWK.

Micrastur interstes Bangs, Auk, xxiv. p. 289, 1907 (La Estrella, Cartago, Costa Rica) ; Brabourne & Chubb, B. S. Amer. i. p. 64, no. 589, 1912.

Adult. Upper surface dark slate-colour with white bars on the

inner webs of the primary and secondary quills; tail dark brown with two white bands which are more pronounced on the inner webs of the feathers, the tips edged with white; throat pale ash-grey; the remaining portions of the under surface narrowly barred with white and slate-brown, tinged with buff on the abdomen; axillaries uniform dark slate-colour; under wing-coverts barred like the abdomen but more narrowly.

Total length 345 mm., culmen 17, wing 176, tail 160, tarsus 62, middle toe and claw 41.

The bird described was collected on the Ituribisi River.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Anarica River, Abary River (*McConnell collection*).

Extralimital Range. Colombia, Ecuador.

Habits. Not recorded in British Guiana.

Genus GERANOSPIZIAS Kaup.

Geranospizias Kaup, Isis, 1847, p. 183. Type *G. gracilis* (Temm.).

This genus has only two species, one of which is confined to Central America and the other to South America. The chief characteristics are the scaling on the hinder portion of the tarsus, commissure of bill slightly festooned, and the feathers of the thighs closely set without any overhanging tufts.

142. *Geranospizias cærulescens*.

GREY CRANE-HAWK.

Sparvius cærulescens Vieill. N. Diet. d'Hist. Nat. x. p. 318, 1817 (Guiana).

Ischnosceles gracilis (nec Temm.), Cab. in Schomb. Reis. Guian. iii. p. 737, 1848.

Geranospizias cærulescens Sharpe, Cat. B. Brit. Mus. i. p. 81, 1874; Brabourne & Chubb, B. S. Amer. i. p. 64, no. 591, 1912.

Geranospizias gracilis (nec Temm.), Salvin, Ibis, 1886, p. 76; Quelch, Timehri (2) vi. p. 142, 1892.

"Blue Sparrow-Hawk" (*Quelch*).

Adult female. General colour above and below dark slate-colour; bastard-wing and primary-coverts black; quills black, blotched and mottled with white chiefly on the inner webs, secondary quills

slate-colour; tail black, white at the base and crossed by two buffy-white bands, the feathers pale at the tips; under wing-coverts more or less barred with white.

Total length 400 mm., culmen 24, wing 275, tail 195, tarsus 79, middle toe and claw 49.

The description of the female is taken from an example obtained at the Takutu Mountains.

Adult male. Similar to the adult female but smaller. Wing 256 mm.

The description of the male is taken from an example in the British Museum collected by Whitely on the Rupununi River on the 24th of March, 1890—Salvin-Godman collection.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Takutu Mountains (*McConnell collection*).

Extralimital Range. Brazil, Venezuela, Peru, Bolivia, Argentina.

Habits. According to Schomburgk (*Reis. Guian.* iii. p. 757) this bird is found on the coast and inland as well. Near the coast it occurs mostly in coffee-plantations, where it prefers the Erythrin-trees. It has not the same habits as most other Falcons, which perch on the outermost branches, but skulks about amongst the branches of the last-named trees. Its food consists of small birds and reptiles. He did not find its nest. The "Macusis" call it *Mohi*.

Mr. J. J. Quelch (*Timehri* (2) vi. p. 142) remarks on this species as follows:—"The Blue Sparrow-Hawk (*Geranospizias gracilis*). This bird is not commonly found on the coast, but occurs along the wooded creeks, where it will be met with perching on the sheltered branches in the more open places."

Genus **ASTUR** Lacep.

Astur Lacepède, *Tableau Oiseaux*, p. 4, 1799. Type *A. palumbarius* (Linn.).

The members of this genus are diagnosed as having the outer toe about equal in length to the inner toe, without claw, and the nostrils oval without a bony tubercle.

143. *Astur poliogaster*.

GREY-BELLIED GOSHAWK.

Falco poliogaster Temm. Pl. Col. i. pl. 264, 1824 ("Brésil").

Astur poliogaster Sharpe, Cat. B. Brit. Mus. i. p. 120, 1874; Brabourne & Chubb, B. S. Amer. i. p. 65, no. 595, 1912.

Urospizias jardinei Gurney, Ibis, 1887, p. 96, pl. iii. ("Hab. uncertain").

Astur jardinei Sharpe, Bull. Brit. Orn. Cl. x. p. 56, 1900 (British Guiana); Brabourne & Chubb, B. S. Amer. i. p. 65, no. 594, 1912.

Adult female. General colour above blackish, cheeks and top of head deep black, the feathers on the nape having white bases, and the feathers on the back a slaty tinge; bastard-wing, primary-coverts, and quills dark brown broadly notched with white on the inner webs of the primary and secondary quills, some of them almost entirely white, while others are only mottled; tail-feathers crossed by three grey bands, these becoming white on the inner webs, the outer feathers tipped with whitish; chin, throat, and entire under surface creamy-white, more or less tinged with grey on the sides of the breast, flanks, axillaries, and under wing-coverts; lower aspect of tail brown barred with silvery white.

Total length 470 mm., culmen (including the cere) 26, wing 260, tail 190, tarsus 58, middle toe and claw 51.

Adult male. Similar to the adult female in colour and markings but smaller.

Total length 352 mm., culmen (including the cere) 23, wing 225, tail 155, tarsus 48, middle toe and claw 41.

Although *U. jardinei* was described in 1887, its habitat was unknown until 1900, when the late Mr. F. V. McConnell received an example from British Guiana—which he presented to the British Museum and from which the description is taken.

When comparing the specimen of *Astur jardinei* (Gurney) in the collection at the British Museum, which was recorded by Sharpe, Bull. Brit. Orn. Cl. x. p. 56, with an example of *A. poliogaster* (Temm.) in the same collection, I found that the two birds were identical in colour and markings, though differing in measurements, but the latter could no doubt be accounted for by the difference in sex. To make certain of the identity, I asked the authorities of the Norwich Museum to allow me to have the type of *Urospizias jardinei*, which was kindly forwarded by the Curator, Mr. F. Leney, and further comparisons

proved the two species to be identical beyond dispute. I have come to the conclusion, therefore, that the type of *U. jardinei* in the Norwich Museum and the specimen from British Guiana in the British Museum are both females of *Astur poliogaster* (Temm.), and that the specimen of *A. poliogaster* in the National collection is a male. The distribution of the species, as far as is known at present, is Guiana, Eastern Brazil, and Paraguay.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Essequibo River.

Extralimital Range. Eastern Brazil and Paraguay.

Habits. Unrecorded in British Guiana.

Genus **ACCIPITER** Briss.

Accipiter Brisson, Orn. i. p. 310, 1760. Type *A. nisus* (Linn.).

This genus is distinguished by having the culmen about half the length of the middle toe and claw.

Key to the Species.

- | | |
|--|---------------------------------------|
| A. Smaller, wing less than 200 mm.; under surface
numerously barred | [p. 227.
<i>A. superciliosus</i> , |
| B. Larger, wing more than 200 mm.; under surface
uniform without bars | <i>A. bicolor</i> , p. 228. |

144. *Accipiter superciliosus*.

EYE-BROWED SPARROW-HAWK.

Falco superciliosus Linn. Syst. Nat. 12th ed. i. p. 128, 1766 (Surinam).

Accipiter tinus Sharpe, Cat. B. Brit. Mus. i. p. 139, 1874; Salvin,
Ibis, 1886, p. 501 (Carimang River); Quelch, Timehri (2) vi.
p. 142, 1892.

Accipiter superciliosus Brabourne & Chubb, B. S. Amer. i. p. 65, no. 597,
1912.

“Little barred Sparrow-Hawk” (*Quelch*).

Adult male. General colour of the upper surface dark brown inclining to black on the head; quills dark brown barred with white on the inner webs; tail also dark brown with paler brown bands and white spots or mottlings on the inner webs of the feathers; sides of face dark grey; throat white; entire under surface barred with brown and white, including the axillaries and under wing-coverts.

Total length 212 mm., culmen 15, wing 132, tail 89, tarsus 38, middle toe and claw 29.

The male described is from the Supenaam River.

Adult female. Similar in plumage, but larger in size than the adult male. Wing 160 mm., tail 106.

Immature. Differs in being rufous brown above and banded with rufous below.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Supenaam River, Bartica, Lower Mazaruni River, Arawai River (*McConnell collection*); Carimang River (*Whitely*).

Extralimital Range. Brazil.

Habits. Mr. J. J. Quelch (*Timehri* (2) vi. p. 142) gives the following remarks on this species:—"The Little Barred Sparrow-Hawk (*Accipiter tinus*). This species does not seem to occur commonly on the coast, preferring the higher and less frequented parts of the interior. This is the first record of the species from the Colony."

145. *Accipiter bicolor*.

FOUR-BANDED SPARROW-HAWK.

Sparvius bicolor Vieill. N. Dict. d'Hist. Nat. x. p. 325, 1817 (Cayenne).

Nisus sexfasciatus Cab. in Schomb. Reis. Guian. iii. p. 736, 1848.

Accipiter bicolor Sharpe, Cat. B. Brit. Mus. i. p. 154, 1874 (British Guiana); Salvin, Ibis, 1886, p. 75 (Bartica Grove, Roraima, 3000 ft.); Quelch, *Timehri* (2) vi. p. 141, 1892; Brabourne & Chubb, B. S. Amer. i. p. 66, no. 606, 1912.

"Red-legged Sparrow-Hawk" (*Quelch*).

Adult male. General colour above dark brown with a tinge of slate-colour on the back and wings; primary and secondary quills broadly notched with white on the inner webs, the white extending to both webs on the innermost secondaries; tail black with two slaty-brown bands and paler at the tip; under surface of body pale slate-grey; axillaries, under wing-coverts, and thighs rufous; under tail-coverts white tinged with buff.

Total length 283 mm., culmen 19, wing 214, tail 151, tarsus 40, middle toe and claw 34.

Adult female. Similar to the adult male, but differs in having very conspicuous shaft-lines on the under surface, and being larger in

size. Total length 410 mm., wing 235, tail 185, tarsus 73, middle toe and claw 58.

Immature. Differs from the adult in being brown above with rufous margins to the feathers and the entire under surface cream-colour.

The male described was collected on the Supenaam River, the female on the Mazaruni River, and the immature on the Ituribisi River.

Breeding-season. Unknown in British Guiana.

Nest Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Mazaruni River, Supenaam River (*McConnell collection*) ; Bartica, Mount Roraima, 3000 feet (*Whitely*).

Extralimital Range. Colombia, Brazil.

Habits. Schomburgk states (*Reis. Guian. iii. p. 736*) that this bird frequents the oasis on the Savannas. The "Macusis" call it *Savato*.

Mr. J. J. Quelch (*Timehri* (2) vi. p. 141) remarks on this species as follows :—"The Red-legged Sparrow-Hawk (*Accipiter bicolor*). These birds do not seem to occur commonly on the coast, specimens having hitherto been obtained chiefly along the uninhabited parts of the great rivers, and more especially on the more elevated parts of the country. They are by no means shy—perhaps from the height and position of their perches, where they are generally secure from molestation. They are very active on the wing, and exercise a kind of terrorising influence over the smaller and even many larger birds."

Genus **HETEROSPIZIAS** Sharpe.

Heterospizias Sharpe, Cat. B. Brit. Mus. i. p. 160, 1874. Type *H. meridionalis* (Lath.).

This monotypic genus is characterized by having the tarsus half the length of the tail, and the nostrils round with large tubercular process.

146. *Heterospizias meridionalis*.

RED-WINGED HAWK.

Falco meridionalis Lath. Ind. Orn. i. p. 36, 1790 (Cayenne).

Hypomorphnus rutilans Cab. in Schomb. Reis. Guian. iii. p. 740, 1848.

Heterospizias meridionalis Sharpe. Cat. B. Brit. Mus. i. p. 160, 1874; Salvin, Ibis, 1886, p. 74; Quelch, Timehri (2) vi. p. 155, 1892; Brabourne & Chubb, B. S. Amer. i. p. 66, no. 609, 1912.

“Great-winged Red Buzzard” (Quelch).

Adult female. Entire plumage composed of rufous and brown. The under surface rufous narrowly barred with brown; crown of head rufous with greyish brown shaft-streaks; back pale brown; distal portion of quills and tail blackish, the latter mottled, banded, and tipped with white.

Total length 520 mm., culmen 36, wing 415, tail 197, tarsus 106, middle toe and claw 64.

We do not know the exact locality, in British Guiana, of the female described.

Adult male. Similar to the adult female but smaller. Wing 410 mm.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains (Mc Connell collection).

Extralimital Range. South America generally to Argentina.

Habits. Schomburgk writes (Reis. Guian. iii. p. 740) that this large and beautiful bird of prey is especially common on the boggy parts of the Savannas, where it hunts its prey which, apparently, consists of reptiles only. Before alighting on the ground it settles for a while, as a rule, on an isolated tree. He usually found it in pairs; it generally appears immediately there is a Savanna fire.

We quote the following notes from Mr. J. J. Quelch (Timehri (2) vi. p. 155):—“The Great-winged Red Buzzard (*Heterospizias meridionalis*). What has been said of the habits, occurrence, and distribution of the two preceding species*, applies equally well to this form, which, however, seems to be a much more active bird, with stronger and more rapid flight—and it is much more frequently seen sweeping along on the wing, especially over the wet savannas and swampy places, than either of the others. The habits of the two preceding species, *Busarellus nigricollis* and *Buteogallus arquinotialis*, are as follows: These birds resort in search of crabs, shells, shrimps, fish, etc., on which they delight to feed, and where they will frequently be met with, either on the stumps or tall trees, or on the mud-flat itself.”

* *Busarellus nigricollis* and *Buteogallus æquinotialis*.

Genus **TACHYTRIORCHIS** Kaup.

Tachytriorchis Kaup, Class. Säug. u. Vögel, p. 123, 1844. Type
T. albicaudatus (Vieill.).

This genus differs from the preceding only in its oval nostrils and the absence of a tubercular process.

147. *Tachytriorchis albicaudatus*.

WHITE-TAILED BUZZARD.

Buteo albicaudatus Vieill. N. Diet. d'Hist. Nat. iv. p. 477, 1816 (British Guiana).

Buteo pterocles Cab. in Schomb. Reis. Guian. iii. p. 739, 1848.

Tachytriorchis albicaudatus Sharpe, Cat. B. Brit. Mus. i. p. 162, 1874 (Demerara); Brabourne & Chubb, B. S. Amer. i. p. 66, no. 610, 1912.

Buteo albicaudatus Salvin, Ibis, 1886, p. 74 (Roraima); Quelch, Timehri (2) vi. p. 160, 1892.

"Snake-Hawk," "Big-chicken Hawk" (Quelch).

Adult male. Head, sides of face, throat, hind-neck, and upper back greyish brown, the base of the feathers on the nape and hind-neck white; small coverts on the edge of the wing white followed by rufous, outer scapulars also rufous; wings blackish with obsolete grey bars on the quills and white bars and mottlings on the inner webs towards the base; rump, upper tail-coverts, and tail white with a few dark bars, a subterminal black band and grey tips to the feathers of the last; under surface narrowly banded with grey on the sides of the body, axillaries, and under wing-coverts.

Total length 460 mm., culmen 31, wing 400, tail 164, tarsus 91, middle toe and claw 46.

We do not know from what part of the Colony the male described was collected.

Adult female. Similar to the adult male but larger. Wing 440 mm.

Immature birds of this species are almost black varied by white or rufous and the tail mottled with grey.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Roraima (Whitely).

Extralimital Range. South America generally to Chile and Argentina.

Habits. According to Schomburgk (Reis. Guian. iii. p. 739), this bird frequents the oasis on the Savannas in large numbers, and its habits are the same as those of the other birds of prey.

Mr. J. J. Quelch (Timehri (2) vi. p. 160) writes :—"This bird is common all over the country, but especially so about the low bush near the savannah streams, such as on the Abary districts, where it is often seen floating in the air, over the flooded or swampy parts especially. Like the Harrier, it goes by the common name of 'Snake-Hawk,' though 'Big-chicken Hawk' is also just as commonly used."

148. *Tachytiorchis abbreviatus*.

ZONE-TAILED BUZZARD.

Buteo abbreviatus Cab. in Schomb. Reis. Guian. iii. p. 739, 1848 (Upper Pomeroon River); Salvin, Ibis, 1886, p. 72.

Tachytiorchis abbreviatus Sharpe, Cat. B. Brit. Mus. i. p. 163, 1874; Brabourne & Chubb, B. S. Amer. i. p. 66, no. 612, 1912.

The following is a translation of Cabanis' description :—General appearance = *B. pterocles*. General coloration blackish, tail somewhat paler with black transverse bars. The feathers of the nape, as well as the greater part of the small feathers on the body, white at the base and white spots near the edge, which is black; these black ends cover the white when the bird sits quiet and can only be seen when the feathers are raised a little. Inner webs of flight-feathers (with the exception of the anterior $\frac{1}{2}$) and inner webs of the tail-feathers dirty white with black bar lines. Bill and claws black. Cere and feet yellow. The Berlin Museum has one specimen of the above species from Mexico. A close comparison of this bird with the *Buteo harlani* Audub., at present unknown to me, will show an affinity to each other. Total length 17·9–18·8 inches (English), bill 1·2, wing 14·3, tail 7·75, tarsus 2·33.

The bird which Cabanis described is not available at the present time, but it appears, from his description, to be the same as *Buteo albonotatus* Gray. There is no bird of this kind in the McConnell collection, neither can we find any from British Guiana in the collection at the British Museum.

The two examples collected by Whitely, one from Mount Roraima and the other from the Merumé Mountains, recorded by Salvin in the 'Ibis,' 1886, p. 72, belong to *B. unicolor* d'Orb.

Breeding-season. Unknown in British Guiana.

Nest. "It is supposed to build its nest of twigs on very tall trees" (*Schomburgk*).

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Pomeroon River (*Schomburgk*).

Habits. Schomburgk writes (*Reis. Guian. iii. p. 739*) that he only once met with this beautiful bird of prey, and that was in the dense virgin forest near the Upper Pomeroon River, from which he gathered that to be its favourite haunts. It is supposed to build its nest of twigs on very tall trees.

Genus BUTEO Lacep.

Buteo Lacepède, *Tableau Oiseaux*, 1799, p. iv. Type *B. buteo* (Linn.).

In this genus the ridge of the bill exceeds half the length of the middle toe, the tail is more than twice the length of the tarsus, the wings, when closed, do not reach to the tip of the tail, the nostrils are long ovals with no tubercle, and the tarsus is bare.

Key to the Species.

- A. Tail grey banded with brown, the bands and interspaces about equal in width ... *B. unicolor*, p. 233.
- B. Tail white with grey narrow crescentic bars and a broad black subterminal band. *B. hypospodius*, p. 235.

149. *Buteo unicolor*.

BLACK BUZZARD.

Buteo unicolor d'Orbigny, *Syn. Av. p. 7*, *Mag. de Zool.* 1837 ("Hab. provincia Ayupayacensi, rep. Boliviana"); *Salvin, Ibis*, 1886, p. 72 (Roraima, 3500 ft., Merumé Mts.).

Buteo erythronotus (nec King), *Sharpe, Cat. B. Brit. Mus. i. p. 172*, 1874.

Adult male. General colour above and below black or dark brown with white bases to the feathers and a shade of hoary grey on the outer webs of the primary and secondary quills, some of which have indications of bars which are more pronounced on the inner webs, the third and fourth primary-quills incised on the outer web, and the first, second, and third incised on the inner web; the long upper tail-coverts have pale edges at the tips; tail hoary grey barred with brown, the bars being about nine in number, including the subterminal band, which is wider than the rest on the middle feathers, the outer feathers somewhat darker than the middle ones, with an inclination to white mottled bars on the inner webs; the feathers on each side at the base of the forehead white; the space

round the eye is covered with short downy feathers, and the region between the eye and the nostrils with black hair-like bristles; underlining of tail and quills for the most part silvery grey.

Total length 490 mm., culmen (including the cere) 32, wing 400, tail 190, tarsus 86, middle toe and claw 48.

This species is not represented in the McConnell collection, and the bird described was collected by H. Whitely at Mount Roraima on June 25th, 1883, and is now in the British Museum—Salvin-Godman collection.

The following is a copy of the original description.—“*B. unicolor* Nob.—Buteo, toto corpore nigrante; basi plumarum albida; basi rostri et occipite albescentibus; remigibus rectricibusque plumbeis transversaliter lineis distinctis; tarsi squamellatis. Lat. 47 cent.—*Hab.* provincia Ayupayacensi (rep. Boliviana).”

Buteo unicolor was placed as a synonym of *E. erythronotus* by Dr. Sharpe in the ‘Catalogue of the Birds in the British Museum,’ and nobody appears to have suspected it to be a distinct species until the late Henry Whitely collected the two specimens mentioned here, one of which was sent to the Paris Museum for comparison with the type of d’Orbigny’s description, by Salvin. (*Cf.* *Ibis*, 1886, p. 72, from which the following extract has been copied:—

“Mr. Whitely obtained two specimens of this Buzzard, one of which I sent to Mons. E. Oustalet, requesting him to be kind enough to compare it with the type of *Buteo unicolor* d’Orbigny from Bolivia. His reply is as follows:—

“‘*CHER MONSIEUR SALVIN*,—Suivant le désir que vous avez exprimé, j’ai comparé l’oiseau que vous m’avez envoyé par l’intermédiaire de M. Stolzmann avec le type du *Buteo unicolor* de d’Orbigny, et j’ai reconnu que les deux spécimens appartenaient très probablement à la même espèce. Cependant les dimensions des ailes ne sont pas absolument concordants, et le plumage, tout en offrant le même dessin, n’est pas entièrement identique sous le rapport des nuances. Ainsi dans le type de *Buteo unicolor* l’aile mesure 37 centimètres, et le doigt médian 3 centimètres (sans l’ongle), tandis que dans le *Buteo* de votre collection l’aile mesure 41 centimètres et le doigt médian près de 4 centimètres. Le type de *Buteo unicolor* est d’un brun fuligineux, avec quelques marques blanches (formées sur la base des plumes) sur la nuque, les ailes brunes avec des raies transversales peu distinctes sur

les plumes secondaires, la queue d'un brun grisâtre avec de nombreuses stries transversales brunes, assez apparentes.

“ ‘ L'oiseau est donc moins foncé en couleur, d'un brun beaucoup moins noir que le spécimen de votre collection, et il a les ailes et les doigts un peu plus courts; mais ses tarses ont la même longueur, son bec la même forme, ses rémiges les mêmes proportions (la 3^{me} étant la plus longue); sa queue et ses ailes présentent le même dessin sur la face supérieure; son front est marqué au dessus des lorums de la même petite tache blanche, etc.

“ ‘ Ces légères différences seraient faciles à expliquer si votre spécimen était une ♀, mais c'est un ♂, et c'est dès lors un peu étonnant qu'il soit légèrement plus grand que le type de *Buteo unicolor*, dont le sexe n'est d'ailleurs pas indiqué. Ce type a été rapporté de Bolivie en 1834 par d'Orbigny, et c'est le seul individu de cette espèce que nous possédions, de sorte que je ne puis savoir si les variations dans les longueurs des doigts et des ailes sont fréquentes chez cet oiseau. Pour moi ces variations sont peu importantes.

“ ‘ Telles sont les quelques remarques que je puis vous transmettre à cet égard, en vous priant de recevoir la nouvelle assurance de mes meilleures sentiments.—E. OUSTALET.' ”

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Mount Roraima, 3500 feet, Merumé Mountains (*Whitely*).

Extralimital Range. Brazil, Venezuela, Colombia, Peru.

Habits. Unrecorded in British Guiana.

150. *Buteo hyospodius*.

GREY-BELLIED BUZZARD.

Buteo hyospodius Gurney, Ibis, 1876, p. 73, pl. iii., lower figure (Medellin, Antioquia, Colombia); Brabourne & Chubb, B. S. Amer. i. p. 67, no. 617, 1912.

Adult female. Head, back, scapulars, and wings slaty black, with a grey tinge on the mantle; the feathers on the nape and back have white bases; primary and secondary quills barred or mottled with heavy grey, tips of primaries uniform blackish; upper tail-coverts and tail white with narrow crescentic bars of grey, and a black subternal band, the lateral feathers more or

less grey on the outer webs; space in front of the eye sparsely covered with black hair-like feathers; sides of face, throat, abdomen, thighs, axillaries, and under wing-coverts blackish; under tail-coverts white irregularly marked with brown.

Total length 480 mm., culmen (including the cere) 36, wing 445, tail 163, tarsus 89.

This species is not represented in the McConnell collection, and the description is taken from an example in the British Museum collected at Quonga, by H. Whitely, October 24th, 1887—Salvin-Godman collection.

Although the bird, mentioned above, was collected by Whitely many years ago, it had escaped the notice of any previous ornithologist. This will, therefore, be the first record of this species in British Guiana.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Quonga (*Whitely*).

Extralimital Range. Brazil, Peru, Colombia, Venezuela.

Habits. Unrecorded in British Guiana.

Genus **BUTEOLA** Bonap.

Buteola Bonaparte, Compt. Rend. Paris, xli. p. 651, 1855. Type *B. brachyura* (Vieill.).

In this genus the tail is more than twice the length of the tarsus, the wings, when closed, do not reach the tip of the tail, and the nostrils are round with distinct central tubercle.

151. *Buteola brachyura*.

SHORT-TAILED BUZZARD.

Buteo brachyurus Vieill. N. Diet. d'Hist. Nat. iv. p. 477, 1816 (Cayenne).

Buteola brachyura Sharpe, Cat. B. Brit. Mus. i. p. 201, 1874; Queleh, Timehri (2) vi. p. 159, 1892 (British Guiana); Brabourne & Chubb, B. S. Amer. i. p. 67, no. 621, 1912.

Adult male. General colour above dark brown or blackish; forehead and bases of the feathers on the head white; inner webs of primary and secondary quills smoky-brown and notched with white; upper tail-coverts barred with white at the base; tail-feathers banded with grey or smoky-brown; space in front and

round the eye covered with short hair-like shafts ; sides of face and sides of neck brown ; throat and entire under surface, including the axillaries and under wing-coverts, white. " Bill blue-black ; feet light orange ; iris brown."

Total length 355 mm., culmen (including the cere) 27, wing 285, tail 136, tarsus 57, middle toe and claw 48.

Adult female. Similar in the colour of the plumage to the adult male, but larger. Wing 310 mm.

This species, which was recorded in British Guiana by Mr. J. J. Quelch, is not represented in the McConnell collection, and the descriptions are taken from individuals in the British Museum. The male bird was collected at Para by E. L. Layard, on the 27th of December, 1872, and the female at Tilotilo, Province Yungas, Bolivia, by C. Buckley—Salvin-Godman collection.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Unknown.

Extralimital Range. South America to South Brazil, Central America, and Florida.

Habits. Mr. J. J. Quelch (Timehri (2) vi. pp. 159 & 160) remarks on this species as follows :—" The small, White-fronted Buzzard, *Buteola brachyura*. This is the first record of this species from the Colony. It does not seem to occur commonly on the coast, being apparently distributed along the bushy margins of the rivers and creeks in the interior."

Genus **ASTURINA** Vieill.

Asturina Vieillot, Anal. nouv. Orn. p. 24, 1816. Type *A. cinerea* Vieill.

In this genus the wings do not reach to the end of the tail, the latter being more than twice the length of the tarsus, and the nostrils oval with indistinct and concealed tubercle at base of upper margin.

152. *Asturina nitida*.

SHINING BUZZARD-HAWK.

Falco nitidus Lath. Ind. Orn. i. p. 41, 1790 (Cayenne).

Asturina nitida Cab. in Schomb. Reis. Guiana, iii. p. 737, 1848 ; Sharpe, Cat. B. Brit. Mus. i. p. 203, 1874 (Demerara) ; Salvin, Ibis, 1886,

p. 72; Quelch, Timehri (2) vi. p. 153, 1892; Brabourne & Chubb, B. S. Amer. i. p. 67, no. 623, 1912.

“Goshawk” or “Grey-barred Buzzard” (Quelch).

Adult male. Back and wings slate-grey with paler bars and edges to the feathers, the quills notched or mottled with white on the inner webs; upper tail-coverts and tail blackish, the former fringed with white and the latter tipped, banded, and spotted with white; top of head and sides of face paler than the back, and the shaft-lines more pronounced; throat almost entirely white; remainder of the under surface barred with grey and white, somewhat darker on the abdomen and much paler on the under wing-coverts; under tail-coverts white.

Total length 385 mm., culmen 28, wing 248, tail 160, tarsus 66, middle toe and claw 54.

The description of the male is taken from an example collected on the Mazaruni River.

Adult female. Similar to the adult male but rather larger. Wing 261 mm.

The description of the female is taken from a specimen in the British Museum collected by Whitely at Annai on June 10th, 1890—Salvin-Godman collection.

Breeding-season. Unrecorded in British Guiana.

Nest. Built of twigs in one of the Erythrinen trees (*Schomburgk*).

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Mazaruni River, Abary River (*McConnell collection*).

Extralimital Range. Brazil, Colombia.

Habits. Regarding this species Schomburgk writes (Reis. Guian. iii. p. 737) that the habits are the same as those of the two preceding species* found on the coast. This species prefers the inner branches of the Erythrinen-tree in the coffee-plantation, where it sits watching for its prey, which consists of insects, reptiles, and small birds. He once found its nest on one of these trees; it was built of twigs and contained two young ones. The “Macusis” and “Arekunas” call it *Wonira*.

Mr. J. J. Quelch (Timehri (2) vi. p. 153) remarks on this species as follows:—“The second species of the group, the so-called Goshawk or Grey-barred Buzzard (*Asturina nitida*), is also a common bird, more especially close to the town and about the

* *Geranospizias cærulescens* and *Rupornis magnirostris*.

estates and low lands of the various tidal creeks. These birds have much of the habits of the foregoing species (*Asturina magnirostris*), but they are much larger, being from 16–18 inches in length, much less numerous, and thus correspondingly less destructive. They are often to be observed hovering in the neighbourhood of the poultry-yards in the country districts, though generally high up in the air, and out of range.”

Genus **RUPORNIS** Kaup.

Rupornis Kaup, Classif. Säug. u. Vögel, p. 120, 1844. Type *R. magnirostris* (Gmel.).

This genus is distinguished by its smaller-sized birds with small feet and the wings, when closed, reaching nearly to the tip of the tail, and, moreover, by the earth-brown and rufous coloration.

153. *Rupornis magnirostris*.

LARGE-BILLED HAWK.

Falco magnirostris Gmel. Syst. Nat. i. p. 282, 1788 (Cayenne).

Rupornis magnirostris Cab. in Schomb. Reis. Guian. iii. p. 737, 1848; Brabourne & Chubb, B. S. Amer. i. p. 68, no. 625, 1912.

Asturina magnirostris Sharpe, Cat. B. Brit. Mus. i. p. 207, 1874 (Demerara); Salvin, Ibis, 1886, p. 72 (Bartica Grove, Camacusa, Atapurau River); W. L. Selater, Ibis, 1887, p. 318 (Maccasseema, Pomeroon River); Lloyd Price, Timehri (2) v. p. 67, 1891 (nesting-habits); Quelch, t. c. p. 105 (Georgetown); id. Timehri (2) vi. p. 120, 1892 (food); id. t. c. p. 151 (habits).

“Grey Chicken-Hawk” or “Great-billed Buzzard” (Quelch).

Adult. Head, hind-neck, sides of face, and throat slate-grey; paler and more ash-grey on the breast, upper wing-coverts, scapulars, and back; primary-coverts and quills bright chestnut, barred and edged with dark brown and white on the inner webs; upper tail-coverts dark brown barred and edged with white; tail black, banded and tipped with grey or smoky-brown; lower breast, sides of body, abdomen, and thighs white barred with chestnut-brown; under tail-coverts white with a few dark spots and shaft-lines; axillaries and under wing-coverts white, narrowly barred with pale brown.

Total length 340 mm., culmen 28, wing 224, tail 143, tarsus 63, middle toe and claw 40.

The specimen from which the description is taken was collected on the Bonasika River.

The male and female appear to be similar.

Breeding-season. Unrecorded in British Guiana.

Nest. "Composed of twigs and built on some of the smaller trees" (*Schomburgk*); "built of sticks in the highest branches of the courida trees" (*Lloyd Price*).

Eggs. "Two in number, white, and spotted with red-brown" (*Lloyd Price*).

Range in British Guiana. Upper Takutu Mountains, Ituribisi River, Supenaam River, Bartica, Bonasika River, Abary River, Berbice River, Cako River, Arwye Creek, Great Falls, Demerara River (*McConnell* collection); Kamakusa, Merumé Mountains, Kamarang River (*Whitely*); Maccasseema, Pomeroon River (*W. L. Sclater*).

Extralimital Range. Venezuela, Colombia, Peru.

Habits. Schomburgk states (*Reis. Guian.* iii. p. 737) that this bird is very common near the coast, where it mostly frequents the more open virgin forests. In the coffee-plantations, it is very often found on the Erythrina-trees watching for its prey. This species, like *G. gracilis*, is, as a rule, found on the branches amongst the foliage. Its nest is composed of twigs and built on some of the smaller trees. The "Warraus" call it *Ohtocamu* and the "Macusis" *Ajaking*.

Mr. J. J. Quelch observed this species in Georgetown, and remarks (*Timehri* (2) v. p. 105) :—"The name Chicken-Hawk is applied indiscriminately to several of the smaller brown or slaty-coloured hawks, which, during early or adult life, are marked on the under surface with dark bars or blotches. One of the commonest, generally to be obtained among the courida branches or mangrove stumps by the mud-flats, is the Great-billed Buzzard (*Asturina magnirostris*)."

Mr. Lloyd Price writes (*Timehri* (2) v. p. 67) :—"A third and much smaller species, of a grey colour (*Asturina magnirostris*?), also frequents the courida trees and builds in the highest branches. The nest is very small for the size of the bird, and, like that of all hawks, built of sticks. The two eggs are white, spotted with red-brown."

Mr. J. J. Quelch (*Timehri* (2) vi. p. 120) writes :—" *Asturina magnirostris*, the food of which, almost entirely, consists of seeds, fruit, and young leaves."

Mr. J. J. Quelch (*Timehri* (2) vi. pp. 150, 151, 152), writing on

“Our Birds of Prey,” remarks:—“The remaining Buzzards include some of the commonest hawks in the Colony; and along the lower tidal parts of the creeks and rivers, they are the birds most frequently seen, either perching on the trees—on the highest branches or the lowest stumps—along the sides, or flying overhead, or seeking food, walking with slow gait on the mud-flats. They include the well-known ‘Grey hawks,’ ‘Red hawks,’ ‘Brown hawks,’ and ‘Black hawks’—nearly all being denoted by the term ‘Chicken-Hawk’ as well.

“The commonest of these is the ‘Grey Chicken-Hawk’ or ‘Great-billed Buzzard’ (*Asturina magnirostris*), which has already been mentioned as being the commonest hawk and of the widest distribution in the colony.

“An account has been already given of the omnivorous nature of these birds, which seem to eat almost everything that comes in their way. They prey upon the bats, and especially the little long-nosed river-bats (*Rhynchonycteris naso*), which they pick off the bark of the trees along the creeks and rivers; and while they must be of great use in destroying fruit-eating bats, which they secure in the late evening before settling down for the night, and other fruit- and grain-destroying mammals, such as the small opossums, and mice and other small rodents, they are pests at the same time to the poultry-yards, where they often pounce upon and carry off the chickens. They must thus be extremely destructive to the young of all birds, the more especially as they do not hesitate to seize and tear to pieces for food the more sluggish species, such as the ‘Old Witches’ or Ani Cuckoos (*Crotophaga ani*), which, from their slow and awkward flight, are more frequently caught than other forms.

“As in the case of the Harriers, these birds will not infrequently be found holding some living bird in their talons and tearing it to pieces, while the air resounds with the despairing cry of the victim. Not much more than a year ago, while collecting on the Abary Creek, our company was suddenly startled, nearly at sundown, by the most unearthly sounds it had been my lot till then to hear, and which were at once, by the more superstitious of the black crew, put down to something out of the ordinary course of human experience. Shortly after, a sudden bend of the creek brought us in sight of one of these hawks, perched on a high branch, and holding in its talons and voraciously tearing, one of the large

'Old Witches' (*Crotophaga major*), which meantime was filling the air with its piercing death shrieks. Wounded birds are sometimes thus seized and carried off, even though the sportsman may be standing within a few yards of the place where the bird has fallen or is struggling. A few months ago, it was my experience to witness the carrying-off by one of these birds, of a Yellow-backed Hang-nest (*Cassius persicus*) which had been shot, and had been caught in the creepers about a by no means high tree, into which it fell, while it struggled in its death throes. The hawk, sitting unseen in some trees close by, had evidently observed the fall of the bird, and hearing its cries and struggles, had seized the opportunity of an easy meal. It darted suddenly into the creeper and, ere a gun could cover it, had flown away with the dying bird.

"In all parts of the Colony, they are to be met with. On the outskirts of the town, or in the country districts; in the low bush, or dense tall forests of the interior; in the open savannahs, or on the high lands; along the open, sheltered or secluded creeks and rivers, or on the exposed mud-flats and swamps, they are almost always to be seen, either perching on some stump or branch, walking on the ground, or flying overhead, while seeking for mammals, birds, reptiles, frogs, insects, crustaceans, or worms, or even fruits and seeds, which seem to be equally acceptable. Their cry is a very characteristic one, frequently repeated as they perch, motionless, on the top of the high dead branches of some great forest tree, where doubtless they build their nests.

"This is the only hawk, which, to my knowledge, having mistaken the stuffed skins of birds put out in the sun to dry, for real bodies, has ever been bold or venturesome enough to dart at them and attempt to carry them off, even in the presence of persons standing not more than a few yards from the spot."

Genus **BUSARELLUS** Lafr.

Busarellus Lafresnaye, Dict. d'Hist. Nat. (d'Orb.) ii. p. 785, 1842.
Type *B. nigricollis* (Lath.).

This monotypic genus is distinguished by having the soles of the feet covered with rugose and thorny spicules.

154. *Busarellus nigricollis*.

BLACK-COLLARED HAWK.

Falco nigricollis Lath. Ind. Orn. i. p. 35, 1790 (Cayenne).

Ichthyoborus busarellus Cab. in Schomb. Reis. Guian. iii. p. 739, 1848.

Busarellus nigricollis Sharpe, Cat. B. Brit. Mus. i. p. 211, 1874 (Demerara); Salvin, Ibis, 1886, p. 74; Quelch, Timehri (2) v. p. 104, 1891 (Georgetown); id. op. cit. vi. pp. 120, 154, 1892 (habits); Beebe, Our Search for a Wilderness. p. 354, 1910 (Abary River); Brabourne & Chubb, B. S. Amer. i. p. 68, no. 629, 1912.

“Black-necked” or “White-headed Buzzard” or “Crab-Hawk,” “Fish-Hawk” (*Quelch*); “Cream-headed Hawk” (*Beebe*).

Adult male. General colour of the plumage both above and below rufous, many of the feathers on the upper surface lined or barred with black; bastard-wing, primary-coverts, and quills black, outer secondary-quills barred with rufous on the inner webs towards the base, increasing in extent towards the innermost, which are rufous barred with black; the tail, which is barred with black, has a broad subterminal band of the same colour; top of head, sides of face, and chin buffy-white with black shaft-lines on the crown and nape, where the feathers are pale rufous; a patch of black feathers on the throat.

Total length 455 mm., culmen (including the cere) 37, wing 386, tail 177, tarsus 80, middle toe and claw 79.

The male described was collected on the Abary River in July 1906.

Adult female. Similar to the adult male.

Breeding-season. Unknown in British Guiana.

Nest. Made of twigs and built on a moderately tall tree (*Schomburgk*).

Eggs. Undescribed from British Guiana.

Range in British Guiana. Abary River (*McConnell collection*); Rupununi River (*Schomburgk*); Georgetown (*Quelch*).

Extralimital Range. Brazil, Peru, Paraguay.

Habits. According to Schomburgk (Reis. Guian. iii. p. 739) this bird was very common on the borders of the Savanna rivers. Its favourite place was a moderately tall tree where it looked out for its prey, which consisted of insects, amputaria, and fish. It also occurred at the edges of the bogs. Schomburgk found its nest, which was composed of twigs and built in a moderately tall tree, near the Rupununi River. The nest contained two young which were just hatched.

Mr. J. J. Quelch, who observed this species in Georgetown, writes (Timehri (2) v. p. 104):—"This species is conspicuous around the outskirts, and even at times in the city itself, or is seen flying overhead. It frequents the mud-flats chiefly in search of crabs, fish, etc., and is commonly known as Crab-Hawk and Fish-Hawk. It is also called the Black-necked Buzzard (*Busarellus nigricollis*).” Also (Timehri (2) vi. p. 154):—"The Black-necked or White-headed Buzzard or Crab-Hawk. The toes of this bird, on their under surfaces, are covered with closely-packed hard spicules (the mark of the genus) giving a very characteristic appearance to the feet, which, doubtless owing to this structure, are generally coated with mud from the mud-flats, whither these birds resort in search of crabs, shells, shrimps, fish, etc.—on which they chiefly delight to feed—and where they will frequently be met with, either on the stumps or tall trees, or on the mud-flat itself.”

Mr. Beebe observes (Our Search for a Wilderness, p. 354):—"Hawks were abundant, and one of the most numerous was the Cream-headed Hawk, which soared low over the savanna or perched on the shrubs along the bank. Small birds showed no fear of it, often alighting on the same tree.”

Genus BUTEOGALLUS Less.

Buteogallus Lesson, Traité d’Orn. p. 83, 1830. Type *B. æquinoctialis* (Gmel.).

In this monotypic genus the wings, when folded, nearly reach to the tip of the tail; soles of the feet smooth and without thorny spicules.

155. *Buteogallus æquinoctialis*.

EQUINOCTIAL BUZZARD.

Falco æquinoctialis Gmel. Syst. Nat. i. p. 265, 1788 (Cayenne).

Hypomorphinus buson Cab. in Schomb. Reis. Guian. iii. p. 740, 1848.

Buteogallus æquinoctialis Sharpe, Cat. B. Brit. Mus. i. p. 212, 1874 (Demerara); Salvin, Ibis, 1886, p. 74; Lloyd Price, Timehri (2) v. p. 67, 1891 (nesting-habits); Quelch, tom. cit. p. 104 (Georgetown); id. op. cit. vi. p. 155, 1892 (habits); Brabourne & Chubb, B. S. Amer. i. p. 68, no. 630, 1912.

“Crab-Hawk,” “Fish-Hawk,” “Black-headed Buzzard” (Quelch).

Adult male. General colour above dark brown with rufous edgings to many of the feathers on the back, scapulars, and wings;

the two outer primary-quills almost entirely black, the third has a patch of rufous—this colour increases in extent towards the inner ones, which are mottled at the base and broadly tipped with black; tail black edged with white at the tip, with an incomplete band of smoky-white, and rufous mottlings towards the base; head and neck all round black; remainder of the under surface rufous barred with brown.

Total length 406 mm., culmen (including the cere) 36, wing 316, tail 150, tarsus 80, middle toe and claw 56.

The male described was collected on the Ituribisi River.

Adult female. Similar to the adult male. Wing 326 mm.

Immature. Brown above with buff edges to the feathers and buff bars and mottlings on the wings, quills, and tail-feathers; crown of head black; forehead, eyebrow, sides of face, and throat white or buffy-white with dark shaft-streaks to the feathers; remainder of the under surface fulvous with dark lanceolate markings to the feathers.

Breeding-season. Unrecorded in British Guiana.

Nest. "Builds its nest in the forked branches of the courida trees. The nest is a heap of dry sticks, a few green leaves on which the solitary egg is laid are placed at the bottom" (*Lloyd Price*).

Egg. "Dirty white colour, blotched with red-brown" (*Lloyd Price*).

Range in British Guiana. Ituribisi River, Abary River (*McConnell collection*); Coast-woods and Savannas (*Schomburgk*); Georgetown (*Quelch*).

Extralimital Range. Colombia, Paraguay.

Habits. According to Schomburgk (*Reis. Guian.* iii. p. 740) this is one of the most common birds of prey in British Guiana, and is found in the coast-woods as well as on the Savannas. It is one of the first to make an appearance at a Savanna fire, to prey on the smaller creatures escaping from the fire. Its nidification was not known to Schomburgk.

Mr. Lloyd Price (*Timehri* (2) v. p. 67) remarks:—"One species of a reddish-brown colour (*Buteogallus arquinotialis*?) builds its nest in the forked branches of the courida trees. The nest is a heap of dry sticks, a few green leaves on which the solitary egg is laid are placed at the bottom. These hawks are very partial to crabs, and may frequently be observed catching them on the mud-flats. This may account for the state of the egg when found, which is always covered with a thick coating of mud, probably

caused by the dirty feet of the bird turning it in the nest. The egg, after it is washed, is of a dirty white colour, blotched with red-brown."

Mr. J. J. Quelch, who observed this species in Georgetown, remarks (Timehri (2) v. p. 104):—This species is conspicuous, and is occasionally to be met with around the outskirts, and even at times in the city itself, or is seen flying overhead; it is about 20 inches in length, and frequents the mud-flats chiefly in search of crabs, fish, etc., and is commonly known as the Crab-Hawk and Fish-Hawk. It is also called the Black-headed Buzzard (*Buteogallus aquinoctialis*). He also writes (Timehri (2) vi. p. 155):—The Black-headed Buzzard (*Buteogallus aquinoctialis*), which is much about the same size, and has much about the same habits, occurrence, and distribution as the preceding (*Busarellus nigricolis*).

Genus **URUBITINGA** Lafr.

Urubitinga Lafresnaye, Dict. d'Hist. Nat. (d'Orb.) ii. p. 786, 1842.
Type *U. urubitinga* (Gmel.).

The members of this genus are large birds with long legs and stout feet. The thigh exceeds the length of the tarsus, and the wings when closed reach to about the middle of the tail. The coloration is almost entirely black.

Key to the Species.

- | | |
|--|--------------------------------|
| A. Basal portion of tail and upper tail-coverts for the most part white | <i>U. urubitinga</i> , p. 246. |
| B. Upper tail-coverts and basal portion of tail for the greater part black | <i>U. anthracina</i> , p. 248. |

156. *Urubitinga urubitinga*.

BRAZILIAN EAGLE.

- Falco urubitinga* Gmel. Syst. Nat. i. p. 265, 1788 (Brazil).
Hypomorphnus urubitinga Cab. in Schomb. Reis. Guian. iii. p. 740, 1848.
Urubitinga zonura Sharpe, Cat. B. Brit. Mus. i. p. 213, 1874 (Demerara);
 Salvin, Ibis, 1886, p. 74; Lloyd Price, Timehri (2) v. p. 67, 1891
 (nesting-habits); Quelch, op. cit. vi. p. 156, 1892 (habits).
Urubitinga urubitinga Beebe, Our Search for a Wilderness, p. 164,
 1910 (Hoorie Creek); Brabourne & Chubb, B. S. Amer. i. p. 68,
 no. 631, 1912.

"Black Hawk," "Black Chicken-Hawk" (*Quelch*); "Black and White Hawk" (*Lloyd Price*).

Adult male. Black above and below; upper tail-coverts white; tail-feathers broadly banded and tipped with white; a few pale specklings on the thighs; primary and secondary quills banded with grey.

Total length 575 mm., culmen (including the cere) 39, wing 415, tail 220, tarsus 118, middle toe and claw 59.

The description of the male is taken from a specimen collected at Cako.

Adult female. Similar to the adult male but larger. Wing 440 mm.

Immature birds show a good deal of white or buff on the feathers of the underparts, and ferruginous marks on the upper parts.

Breeding-season. Unrecorded in British Guiana.

Nest. "This species builds in high trees" (*Lloyd Price*). "The nest was built in unscaleable trees on the Lower Waini River" (*Schomburgk*).

Eggs. "Lays one egg" (*Lloyd Price*).

Range in British Guiana. Supenaam River, Abary River, Anarica River, Cako River, Great Falls, Demerara River (*McConnell collection*); Waini River (*Schomburgk*); Coast area (*Quelch*).

Extralimital Range. Venezuela, Eastern Peru, Paraguay, Argentina, Chile.

Habits. Schomburgk states (*Reis. Guian.* iii. p. 740) that this large bird of prey inhabits the woods. He found it rather common in the boggy woods near the mouth of the River Waini. Its favourite resting place was the lower branches of the trees on the borders of that river. It is often seen on the ground when hunting for its prey, which consists of amphibia, insects, birds, and small mammals. It is said that it also preys on small monkeys. Its nest was built in unscaleable trees on the Lower Waini River. The "Macusis" call it *Wæwipany*, and the "Warraus" *Ohto*.

Mr. Lloyd Price (*Timehri* (2), v. p. 67) observes:—"The large Black and White Hawk (*Urubitinga zonura*?) may sometimes be noticed; this species builds in high trees, and lays one egg."

Mr. J. J. Quelch (*Timehri* (2), vi. p. 156) remarks:—"The 'Black Hawk' or 'Black Chicken-Hawk' (*Urubitinga zonura*). . . This large hawk is one of the commonest in the Colony, being distributed all over the coast area. I have never met with it in

the interior, nor in the forest or hilly districts; but along the estuarine parts of the great rivers, and the tidal portions of the main creeks, it is to be met everywhere, especially about the cultivated districts near the town, and even in the neighbourhood of the town itself. It is much dreaded in the poultry-yards, from which it not infrequently carries off young birds of all kinds, and being a powerful bird on the wing, it is equally able to successfully attack poultry of larger size. Its food is of a very miscellaneous character, consisting of small mammals, birds, reptiles, frogs, and insects, though reptiles seem to afford its main portion. When seen on the wing, sailing as it were in the air, with only occasional flaps of the wings, it is not unlike the Aura Vulture, except that the white base of the tail is very conspicuous and distinctive, and serves at once to distinguish the species from all others. The passage of this bird over or near to the poultry-yard will always be noticeable owing to the peculiar clucking noise set up by the fowls, which seem to recognize instinctively an hereditary foe."

Mr. Beebe (Our Search for a Wilderness, p. 164) writes:—"About noon a third migrational flocking of birds was noticed; seventy-two large South American Black Hawks circling slowly around, setting their wings after a while and sailing off to the west as one bird."

157. *Urubitinga anthracina*.

MEXICAN BLACK HAWK.

Falco anthracinus Nitzsch, Syst. Pteryl. p. 83, 1840 (Mexico).

Hypomorphnus anthracinus Cab. in Schomb. Reis. Guian. iii. p. 740, 1848.

Urubitinga anthracina Sharpe, Cat. B. Brit. Mus. i. p. 215, 1874; Salvin, Ibis, 1886, p. 74; Quelch, Timehri (2) vi. p. 157, 1892; Brabourne & Chubb, B. S. Amer. i. p. 69, no. 633, 1912.

Adult male. General colour above and below slaty-black with white bases to the feathers on the nape, which are more or less marked with rufous; the outer primaries mottled with white on the inner web towards the base; the inner primary and secondary quills mottled with rufous and hoary grey; upper and under tail-coverts edged with white at the tips; a narrow white band on the base of the tail, and a broader one towards the tip, the tip also edged with white; the feathers on the abdomen, thighs, and under wing-coverts narrowly edged with rufous.

Total length 530 mm., culmen (including the cere) 31, wing 357, tail 199, tarsus 92.

The McConnell collection does not possess an example of this species, and the description of the male is taken from a specimen in the British Museum, collected by Mrs. D. W. Smith on the Island of St. Vincent, February 12th, 1889—Salvin-Godman collection.

Adult female. Similar to the adult male. Wing 370 mm.

Breeding-season. Unknown in British Guiana.

Nest. "In tall trees" (*Schomburgk*).

Eggs. Undescribed from British Guiana.

Range in British Guiana. Near the mouth of the Waini River (*Schomburgk*).

Extralimital Range. Brazil, Trinidad, Cuba, St. Vincent, and Central America.

Habits. According to Schomburgk (*Reis. Guian.* iii. p. 740) this bird is distributed over the whole of British Guiana, and has the same habits as those of the previous species, *U. urubitinga*. He also found it numerous in the damp woods near the mouth of the River Waini. If there is a Savanna fire this bird and the preceding species are there immediately, preying on the reptiles and quadrupeds that are escaping from the fire. Schomburgk says that he often saw its nest on the tall trees.

Mr. J. J. Quelch remarks on this species (*Timehri* (2), vi. pp. 157, 158):—"Another species of this genus, *U. anthracina*, has been recorded by Prof. Cabanis from the Colony, and has, apparently on this authority, since the bird has not been met with by Whitely, been included by Salvin in his revised list. It has been included in the foregoing list of the hawks of British Guiana on the same authority, though the species does not occur in our Museum collection, nor indeed has ever been met with, or heard of, by me in any part of the Colony."

Genus **LEUCOPTERNIS** Kaup.

Leucopternis Kaup, *Isis*, 1847, p. 210. Type *L. melanops* (Lath.).

The members of this genus are much smaller than those of the preceding, and for the most part white in colour, instead of nearly all black. The wing has a different formula, the second primary being intermediate in length between the sixth and seventh.

Note.—*Leucopternis polionotus* Kaup, *Isis*, 1847, p. 212—founded on *Buteo polionotus* Gray, *Cat. Accipitr.* in *Brit. Mus.* p. 17, 1844 (*descr. nulla*), has priority over *L. palliata* (Pelzeln & Natterer), 1861; and must replace the latter name in Brabourne & Chubb's *B. S. Amer.* i. p. 69, no. 638, 1912.

Key to the Species.

- A. Larger, wing more than 250 mm., top of head with dark narrow shaft-streaks; upper tail-coverts white; tail white broadly banded with black *L. albicollis*, p. 250.
- B. Smaller, wing less than 250 mm.; top of head broadly streaked with black; upper tail-coverts black; tail black, narrowly banded and slightly tipped with white *L. melanops*, p. 251.

158. *Leucopternis albicollis*.

WHITE-COLLARED HAWK.

Falco albicollis Lath. Ind. Orn. i. p. 36, 1790 (Cayenne).

Asturina pæcilonota Cab. in Schomb. Reis. Guian. iii. p. 737, 1848.

Urubitinga albicollis Sharpe, Cat. B. Brit. Mus. i. p. 216, 1874.

Leucopternis albicollis Salvin, Ibis, 1886, p. 74 (Camacusa); W. L. Slater, Ibis, 1887, p. 319 (Seceeka, Ari-pia-caru, Pomeroon River); Quelch, Timehri (2) vi. p. 158, 1892 (habits); Brabourne & Chubb, B. S. Amer. i. p. 69, no. 636, 1912.

Adult. Head, back, and entire underparts white with dark shaft-lines on the head and a few dark blotches on the mantle; wings black, many of the feathers barred and tipped with white; primary and secondary quills barred, chiefly on the inner webs, and tipped with white, and also barred with grey; tail-feathers white, broadly banded with black.

Total length 470 mm., culmen (including the cere) 34, wing 339, tail 200, tarsus 75, middle toe and claw 61.

The bird described was collected on the Ituribisi River.

We are unable, for the want of more material with proper data, to say what the difference between the male and female is.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Abary River, Mazaruni River (*McConnell* collection); Kamakusa (*Whitely*); Seceeka, Ari-pia-caru, Pomeroon (*W. L. Slater*); Ourunei (*Whitely*).

Extralimital Range. Northern Brazil, Venezuela, Trinidad.

Habits. Schomburgk states (Reis. Guian. iii. p. 737) that he only once met with this species, and that was in the virgin forest on the coast.

Mr. J. J. Quelch (Timehri (2), vi. p. 158) remarks:—"A very beautiful species, *Leucopternis albicollis*, will be met with along the rivers, especially in the more wooded and secluded districts. It

does not appear to occur on the cleared lands of the coast, nor on the low savannahs. Around the Indian cassava fields or deserted settlements, it will at times be found perching in the undercover or in the sheltered branches of the trees, jumping from branch to branch in search of grasshoppers, locusts, cicadas, and reptiles; but I have never seen it on the exposed topmost bare branches, so much frequented by the generality of hawks. It is, therefore, not easy to secure, for one generally comes upon it suddenly and at close quarters, and almost before one is aware of it, the bird has jumped into some little thicket of branches and is lost from view."

159. *Leucopternis melanops*.

BLACK-FACED HAWK.

Falco melanops Lath. Ind. Orn. i. p. 37, 1790 (Cayenne).

Asturina melanops Cab. in Schomb. Reis. Guian. iii. p. 737, 1848.

Urubitinga melanops Sharpe, Cat. B. Brit. Mus. i. p. 220, 1874.

Leucopternis melanops Salvin, Ibis, 1886, p. 75 (River Atapurau);
 Quelch, Timehri (2) vi. p. 158, 1892 (Seba, Demerara); Brabourne
 & Chubb, B. S. Amer. i. p. 69, no. 641, 1912.

Adult. Head and mantle white with black shaft-streaks to the feathers, which become pear-shaped on the mantle; lores, eyebrow, and a spot behind the eye black; back and wings black with white bases and white bars to the feathers, the primary and secondary quills have obsolete brown bars; upper tail-coverts and tail black, the latter banded and tipped with white; entire under surface white.

Total length 380 mm., culmen (including the cere) 31, wing 211, tail 133, tarsus 67, middle toe and claw 41.

The description of the bird is taken from an example collected on the Ituribisi River.

The male and female appear to be alike, but more material is required before we can say definitely.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Ituribisi River, Bartica, Tiger Creek (*McConnell collection*); Kamarang River (*Whitely*).

Extralimital Range. Northern Brazil.

Habits. This bird, according to Schomburgk (Reis. Guian. iii. p. 737), prefers the oasis on the Savannas, where it is common and

is mostly seen perching on the tops of the trees near the edge of the oasis. It was often seen searching for amphibia. Schomburgk did not find its nest.

Mr. J. J. Quelch remarks on this species (Timehri (2) vi. pp. 158, 159):—"A very beautiful species, *Leucopternis melanops*, will be met with along the rivers, especially in the more wooded and secluded districts. It does not appear to occur on the cleared lands of the coast, nor on the low savannahs. Around the Indian cassava fields or deserted settlements, it will at times be found perching in the undercover or in the sheltered branches of the trees, jumping from branch to branch in search of grasshoppers, locusts, cicadas, and reptiles; but I have never seen it on the exposed topmost bare branches, so much frequented by the generality of hawks. It is, therefore, not easy to secure, for one generally comes upon it suddenly and at close quarters, and almost before one is aware of it, the bird has jumped into some little thicket of branches and is lost from view.

"This species is much more commonly met with than the larger *Leucopternis albigollis*, and will at times be seen flying about cleared and open spaces in the forest, such as at Seba, along the Demerara River."

Mr. Quelch's article under the genus *Leucopternis* (p. 158) is applied to *L. albigollis* and *L. melanops*. We have, therefore, copied the same remarks under each species.

Genus **MORPHNUS** Dumont.

Morphnus Dumont, Dict. Sci. Nat. i. p. 88, 1816. Type *M. guianensis* (Daud.).

This monotypic genus is distinguished by the long tail and nuchal crest. The distance between the summit of the nostril and the ridge of the culmen is less than the length of the nostril itself.

160. **Morphnus guianensis.**

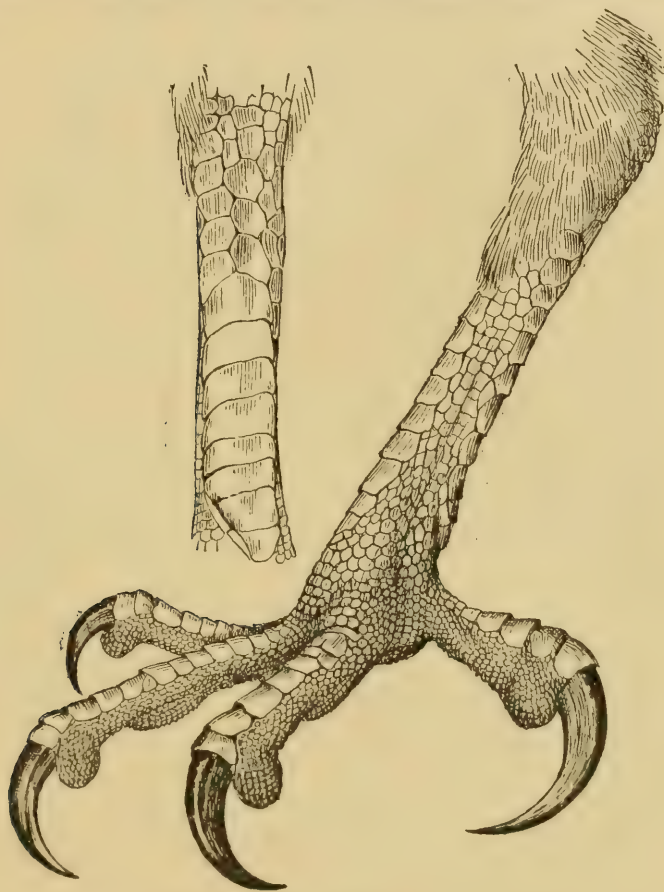
GUIANA CRESTED EAGLE.

Falco guianensis Daud. Traité. ii. p. 78, 1800 (Guiana).

Morphnus guianensis Cab. in Schomb. Reis. Guian. iii. p. 738, 1848; Sharpe, Cat. B. Brit. Mus. i. p. 222, 1874 (British Guiana); Salvin, Ibis, 1886, p. 75 (Bartica Grove); Quelch, Timehri (2) vi. p. 148, 1892; Beebe, Our Search for a Wilderness, p. 137, 1910 (Hoorie Creek); Brabourne & Chubb, B. S. Amer. i. p. 70, no. 646, 1912.

Adult. General colour above blackish, the feathers mottled with white and brown, the mottlings on the flight-quills rather darker

and broken up into irregular bands ; tail black, with four mottled grey bands and tipped with a similar colour ; head, face, and throat pale brown with darker shaft-lines ; fore-neck and chest blackish ; remainder of the under surface white, freckled with



Morphnus guianensis. $\frac{2}{3}$ nat. size.

Fig. 52.—To show the scutellations on the tarsi and toes and the large hind claw.

brown and barred with black ; the bands on the quills and tail below much paler than above.

Total length 820 mm., culmen (including the cere) 43, wing 452, tail 365, tarsus 105, middle toe and claw 71, hind claw without toe 38.

The bird described was collected on the Mazaruni River.

Breeding-season. Unknown in British Guiana.

Nest. It builds its large nest in unscaleable trees (*Schomburgk*).

Eggs. Undescribed from British Guiana.

Range in British Guiana. Mazaruni River (*McConnell collection*); Tuarutu and Canuku Mountains (*Schomburgk*); Bartica (*Whitely*); Hoorie Creek (*Beebe*).

Extralimital Range. Colombia, Eastern Peru, Paraguay.

Habits. Schomburgk (Reis. Guian. iii. p. 738) says that this beautiful bird of prey is one of the largest species inhabiting British Guiana. He found it fairly common near the Tuarutu and Canuku Mountains. It was rarer near the coast. He often saw it in the tall trees growing on the river-banks or soar over the woods in a graceful manner. It builds its large nest in unscaleable trees. It preys on the smaller species of monkeys. It raises its crest like the Harpy.

Mr. J. J. Quelch remarks on this species as follows (Timehri (2) vi. p. 148):—"The so-called Crested Eagle (*Morphnus guianensis*). This species seems to have much about the same distribution in the Colony as the Harpy (*Thrasaëtus harpyia*), being never met with actually in the coast districts—but little or nothing is known of its habits."

Genus **THRASAËTUS** Bonap.

Thrasaëtos Bonaparte, P. Z. S. 1837, p. 108. Type *T. harpyia* (Linn.).

The chief distinctions in this monotypic genus are the large size, occipital crest, and the distance between the summit of the nostril and the ridge of the culmen being greater than the length of the nostril itself.

161. **Thrasaëtus harpyia.**

HARPY EAGLE.

Vultur harpyja Linn. Syst. Nat. 10th ed. i. p. 86, 1758 (Mexico).

Thrasaëtus harpyia Sharpe, Cat. B. Brit. Mus. i. p. 224, 1874 (British Guiana); Salvin, Ibis, 1886, p. 75; Quelch, Timehri (2) iv. p. 327, 1890 (Berbice River); id. op. cit. vi. p. 147, 1892 (Demerara and Essequibo Rivers); Lloyd, op. cit. (2) xi. p. 8, 1897 (habits); Brabourne & Chubb, B. S. Amer. i. p. 70, no. 648, 1912.

Morphnus harpyia Cab. in Schomb. Reis. Guian. iii. p. 738, 1848.

Harpyhaliaetus coronatus (nec Vieill.), Brown, Canoe and Camp Life, p. 239, 1876 (Upper Essequibo).

Adult. General colour above black, the flight-feathers coarsely mottled with brown and grey; tail black with four mottled grey bands, the tips of the feathers also slightly edged with grey; top



Thrasaëtus harpyia.

Fig. 53.—To show the occipital crest.

of head, throat, and neck all round, dark ash-grey, the long crest-feathers blackish; chest black; abdomen and under tail-coverts white; thighs narrowly barred with dark brown; lesser under wing-coverts black, more or less intermixed with white; under surface of quills and tail-feathers broadly banded with pale grey. "Bill black; feet yellow; iris brown."

Total length 990 mm., culmen (excluding the cere) 51, wing 600, tail 390, tarsus 124, middle toe and claw 114, hind claw without toe 70.

The bird from which the description is taken was collected on the Puruni River.

Breeding-season. Unrecorded in British Guiana.

Nest. Returns each year to the same nest to breed (*C. A. Lloyd*). Nests on the topmost branches of tall trees, the nest being as large as that of the large *Mycteria* (*Schomburgk*).

Eggs. ? Two in number (*C. A. Lloyd*).

Range in British Guiana. Mazaruni River, Puruni River (*McConnell* collection); Berbice, Demerara, and Essequibo Rivers (*Quelch*); Essequibo River (*Schomburgk*); Kanaku Mountain Range (*C. A. Lloyd*).

Extralimital Range. South America to Paraguay and Central America to Mexico.

Schomburgk states (*Reis. Guian.* iii. p. 738) that this is the largest and finest bird of prey in British Guiana, but is rather rare—he had only seen a few specimens. He says, however, that it is fairly common in the vicinity of the sources of the River Essequibo, as the natives in that district had many ornaments which they had made with its feathers. He brought one alive to Europe and deposited it in the Zoological Gardens in Berlin, but it did not live long. This bird looks more grand in the pure white immature plumage than when adult. According to the natives the Harpy is the monkeys' greatest enemy, and they begin to wail the moment they catch sight of one. Schomburgk also mentions (*vol. ii. p. 365*) that it preys on sloths, and is said to tear them to pieces while they are clinging tightly to the branch of the tree on which the Harpy had attacked them. It rests on the topmost branches of tall trees, the nest being as large as that of the large *Mycteria*. The "Macusis" call it *Guan*.

Mr. J. J. Quelch states (*Timebri* (2) iv. p. 327) that he obtained a specimen of the Harpy Eagle (*Thrasaëtus harpyia*) on the Upper Berbice River.

The following remarks are quoted from the same author (*op. cit.* (2) vi. p. 148) :—"The Harpy (*Thrasaëtus harpyia*). This bird is a true inhabitant of the forest, and ranges in this kind of district all over the Colony. It has been shot on the Berbice, Demerara, and Lower Essequibo Rivers, and it is more particularly met with in the elevated or hilly districts, where it will occasionally be found perching on the top of some dead 'giant of the forest,' evidently the better to scour the surrounding country for its victims. It preys on all the larger birds, such as macaws, and on mammals, such as the deer and sloth—the latter especially being subject to its voracity, since its only chance of escape lies in its protective colouring.

"In stock-raising countries it is much feared, as, owing to its great strength, it does not hesitate to attack and kill sheep, pigs, and calves."

Mr. C. A. Lloyd remarks (Timehri (2) xi. p. 8) :—"The Silk Cotton is the favourite tree of the Harpy, *Thrasaëtus harpyia*; this bird returns yearly to the same nest to breed. I have never seen the eggs of the Harpy, but the Indians relate that their nests generally contain two young ones, and most probably this is the number of eggs in a clutch. The Kanaku Mountain Range seems to be their chief breeding-quarters on the Savannah.

"The Harpy preys largely on sloths and baboons, *Myctes seniculus*—especially on the former,—and the ground about the nesting-tree is sometimes literally strewn with the bones and hair of these animals."

Mr. Barrington Brown states (Canoe and Camp Life, p. 239) that :—"Whilst Ben was in pursuit of a flock of Trumpet-birds, an Eagle-Hawk (*Harpyhaliaetus coronatus*) swooped down at him, and, passing close to his head, lit on a bough before him, when, to punish it for its audacity, he shot it."

Genus **SPIZASTUR** Gray.

Spizastur Gray, List Genera Birds, 2nd ed. p. 3, 1841. Type *S. melanoleucus* (Vieill.).

This genus belongs to the true Eagles, which have the outer toe only connected to the middle toe by membrane, the tibia longer than the tarsus, the latter feathered down to the toes, the distance between the tips of the primaries and tips of the secondaries is more than the length of the tarsus, the claws long and much curved.

162. *Spizastur melanoleucus*.

BLACK-AND-WHITE HAWK-EAGLE.

Buteo melanoleucus Vieill. N. Dict. d'Hist. Nat. iv. p. 482, 1816 (Guiana).

Spizastur melanoleucus Sharpe, Cat. B. Brit. Mus. i. p. 258, 1874; Brabourne & Chubb, B. S. Amer. i. p. 70, no. 650, 1912.

Adult female. Occipital patch, upper back, scapulars, wings, and upper tail-coverts black, inclining to dark brown on the lower back and inner secondaries; inner web of primary and secondary quills for the most part white, especially towards the base; the secondary-quills banded with black and smoky-brown and edged with whitish at the tips; long upper tail-coverts and tail-feathers greyish brown, the former darker towards the tip, the latter having four blackish bands, the subterminal one broader than the others, the inner webs more or less white towards the base; space in front and round the eye covered with blackish hair-like feathers; fore part of head, hind-neck, sides of neck, throat, and entire under surface white; lower aspect of quills and tail-feathers silvery grey banded with dark brown.

Total length 610 mm., culmen (including the cere) 36, wing 385, tail 226, tarsus 70, middle toe and claw 75.

Adult male. Similar to the adult female, but somewhat smaller in size. Wing 384 mm.

This species is not represented in the McConnell collection, and the description of the female is taken from an example in the British Museum collected by Whitely on the Rupununi River on January 10th, 1890—Salvin-Godman collection.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Rupununi River (*Whitely*).

Extralimital Range. South America generally to South-east Brazil and Central America to Guatemala.

Habits. Unrecorded in British Guiana.

Genus *SPIZAËTUS* Vieill.

Spizaëtus Vieillot, Anal. nouv. Orn. p. 24, 1816. Type *S. ornatus* (Daud.).

The members of this genus differ from that of the preceding by having an occipital crest, and by the distance between the tips of the primary and secondary quills being less than the length of the tarsus.

Key to the Species.

- A. Throat, fore-neck, and middle of breast uniform white; sides of face, sides of neck, and sides of breast chestnut-brown; under tail-coverts white, irregularly barred with brown..... *S. ornatus*, p. 259.
- B. Throat, fore-neck, and middle of breast streaked with black and white; sides of face and sides of neck black; under tail-coverts black regularly barred with white *S. tyrannus*, p. 260.

163. *Spizaëtus ornatus*.

MAUDUIT'S HAWK-EAGLE.

Falco ornatus Daud. Traité, ii. p. 77, 1800 (Cayenne).

Spizaëtus mauduyti Sharpe, Cat. B. Brit. Mus. i. p. 262, 1874.

Spizaëtus ornatus Salvin, Ibis, 1886, p. 75 (Bartica Grove); Quelch, Timehri (2) vi. p. 149, 1892; Brabourne & Chubb, B. S. Amer. i. p. 70, no. 651, 1912.

"White-breasted Crowned Eagle" (*Quelch*).

Adult male. General colour of the upper surface black broadly banded with brown on the tail and flight-quills and narrowly edged with white on the upper wing-coverts, back, and upper tail-coverts, with a certain amount of white on the inner webs of the primary and secondary quills: crown of head and occipital crest uniform black; hind-neck, sides of face, and sides of breast chestnut-brown; a black line from the gape down the sides of the neck skirting the white on the throat, fore-neck, and middle of breast; remainder of the under surface white, broadly barred with black on the abdomen and axillaries, narrower on the under wing-coverts and thighs, and more sparingly on the under tail-coverts.

Total length 640 mm., culmen (including the cere) 39, wing 360, tail 245, tarsus 87, middle toe and claw 70, hind claw without toe 42.

Immature female. Almost uniform white below, with scarcely any trace of chestnut-brown on the sides of the breast and hinder cheeks; head white tinged with chestnut-brown; remainder of the upper surface chiefly brown.

The descriptions of the male and female are taken from examples collected on the Berbice River.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Berbice River (*McConnell collection*); Bartica (*Whitely*).

Extralimital Range. South America to Paraguay and Central America to Guatemala.

Habits. Unrecorded in British Guiana.

164. *Spizaetus tyrannus*.

TYRANT HAWK-EAGLE.

Falco tyrannus Wied, Reis. Bras. i. p. 300, 1820 (Rio Belmonte).

Spizaetus tyrannus Sharpe, Cat. B. Brit. Mus. i. p. 264, 1874 (Demerara); Quelch, Timehri (2) vi. p. 150, 1892; Brabourne & Chubb, B. S. Amer. i. p. 71, no. 653, 1912.

“Black-breasted Crowned Eagle” (*Quelch*).

Nearly adult. General colour above black, broadly banded with brown on the primary and secondary quills and tail, the last tipped with white and the bands waved with the same colour; upper tail-coverts spotted and edged with white; the flight-quills notched with white on the inner webs; crown of head and crest-feathers white at the base with black tips; sides of face and sides of neck black; throat and fore-neck white with broad black shaft-lines which widen out on the chest, becoming smoky-brown and white on the breast; axillaries, flanks, abdomen, and under tail-coverts black barred with white; under wing-coverts white barred with black; under surface of quills and tail dark brown banded with silvery grey.

Total length 690 mm., culmen (including the cere) 38, wing 395, tail 323, tarsus 90, middle toe and claw 62, hind claw without toe 39.

The bird described was collected on the Mazaruni River.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Mazaruni River (*McConnell collection*).

Extralimital Range. South America to South-east Brazil and Central America to Guatemala.

Habits. Unrecorded in British Guiana.

Mr. J. J. Quelch (Timehri (2) vi. p. 150) gives a description of this species from Guiana, and calls it the Black-breasted Crowned Eagle; he also remarks that it is not included in Salvin's revised list of the birds of British Guiana.

Genus **HERPETOTHERES** Vieill.

Herpetotheres Vieillot, N. Diet. d'Hist. Nat. xviii. p. 317, 1817. Type
H. cachinnans (Linn.).

This monotypic genus is distinguished by having the tarsi bare on the lower portion, the nostrils circular, and in having the tarsi reticulate on the frontal portion.

165. **Herpetotheres cachinnans.**

LAUGHING HAWK.

Falco cachinnans Linn. Syst. Nat. 10th ed. i. p. 90, 1758 (Cayenne).
Herpetotheres cachinnans Cab. in Schomb. Reis. Guian. iii. p. 738,
1848; Sharpe, Cat. B. Brit. Mus. i. p. 278, 1874 (British Guiana);
Salvin, Ibis, 1886, p. 77; Quelch, Timehri (2) v. p. 105, 1891
(Georgetown); id. op. cit. vi. pp. 120, 132, 1892 (habits).

“Crested or Laughing Falcon,” “Black-faced Chicken-Hawk”
(*Quelch*).

Adult female. Crown of head, collar round hind-neck, and entire underparts creamy-white, with dark shaft-lines to the feathers, more pronounced on the head and axillaries; lores, sides of face, and a line above the eye black, the line extending on to the hind-neck, where it forms a collar; back, wings, and tail dark brown; the tail barred and tipped with white, or creamy-white, as are also the primary and secondary quills. “Bill black; feet orange; iris hazel.”

Total length 410 mm., culmen 25, wing 278, tail 210, tarsus 60, middle toe and claw 58.

The female described was collected on the Abary River.

Adult male. Similar to the adult female but rather smaller. Wing 260 mm.

Breeding-season. Unknown in British Guiana.

Nest. “Its nest is composed of twigs and built on moderately tall trees” (*Schomburgk*).

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Essequibo River, Abary River (*McConnell collection*); Savannas (*Schomburgk*); Georgetown (*Quelch*).

Extralimital Range. Venezuela, Peru, Bolivia, Paraguay, and Central America to Mexico.

Habits. According to Schomburgk (Reis. Guian. iii. p. 738) this bird was observed by him in the woods near the coast and in the oasis on the Savannas. It makes itself conspicuous by its loud

call. It usually perches, as most other birds of prey do, by selecting a dead branch near the top of a tree. Its favourite prey is amphibia, but it is also fond of birds. The nest is composed of twigs and built on moderately tall trees. Schomburgk says that he never saw this bird in a soaring position.

Mr. J. J. Quelch observed this species in Georgetown, and remarks (Timehri (2) v. pp. 104, 105) :—"The name Chicken-Hawk is applied indiscriminately to several of the smaller brown or slaty-coloured hawks. But perhaps the commonest of these birds on the outskirts of the town is the Crested or Laughing Falcon (*Herpetotheres cachinnans*)."

Mr. Quelch also writes (Timehri (2) vi. pp. 120, 132) :—"The Common Black-faced Chicken-Hawk or Laughing Falcon (*Herpetotheres cachinnans*) feeds chiefly on snakes and lizards. . . . (p. 132). This Hawk is commonly met with on the coast and on the outskirts of the town, and, as its name indicates, is particularly fond of reptiles for food : lizards and snakes, the latter especially, being its main diet, though chickens from the poultry-yard have not infrequently been known to be carried off—hence its common name of Chicken-Hawk. It will often be seen perching on the low bush, tall palms and other trees, swamps and other places, though just as frequently on short stumps and sticks close to the ground, or on the ground itself. Very often it will be noticed hovering, like a wind-hover, close to the ground, over the grassy and bushy areas, in search of the small grass-snakes and lizards. The little so-called horsewhip or three-lined grass-snake (*Dromicus lineatus*) seems to be its most frequent victim. Its cry is loud, hoarse, and shrill, and at times is very frequently repeated and can be heard from a great distance."

Genus **ELANOIDES** Vieill.

Elanoides Vieillot, N. Dict. d'Hist. Nat. xxiv. p. 101, 1818. Type *F. forficatus* (Linn.).

This monotypic genus is distinguished chiefly by the deeply-forked tail, the outer feather being longest, and the long wings, which extend beyond the tip of the tail.

166. *Elanoides forficatus*.

SWALLOW-TAILED KITE.

Falco forficatus Linn. Syst. Nat. 10th ed. i. p. 89, 1758 (Carolina).
Nauclerus furcatus Cab. in Schomb. Reis. Guian. iii. p. 735, 1848.

Elanoides furcatus Sharpe, Cat. B. Brit. Mus. i. p. 317, 1874; Salvin, Ibis, 1886, p. 76 (Bartica Grove); Lloyd Price, Timehri (2) v. p. 67, 1891 (nesting-habits); Quelch, op. cit. vi. p. 120, 1892 (food), p. 136 (habits).

Elanoides forficatus Beebe, Our Search for a Wilderness, pp. 154, 250, 1910 (Waini River, Aremu River); Brabourne & Chubb, B. S. Amer. i. p. 71, no. 654, 1912.

"Scissor-tailed Hawk" or "Kite" (*Quelch*); "Blue and White Scissor-tail Hawk" (*Lloyd Price*).

Adult female. Head, hind-neck, and entire under surface white, as is also the lower back; mantle and lesser upper wing-coverts bronzy brown; wings, long scapulars, and tail slaty black, all the feathers of the dark portion have white bases. "Bill dark horn-blue; feet light milk-blue; iris rich dark reddish brown."

Total length 530 mm., culmen (including the cere) 28, wing 425, tail 293, tarsus 35, middle toe and claw 40.

The female from which the description is taken was collected on the Demerara River.

Adult male. Similar to the adult female. Wing 423 mm.

Nestling. Covered with short white down.

Breeding-season. Unknown in British Guiana.

Nest. "Is built in the high branches of the lofty mora-trees" (*Lloyd Price*). "Composed of twigs and built on inaccessible trees" (*Schomburgk*).

Eggs. "Two eggs of a glossy white" (*Lloyd Price*).

Range in British Guiana. Demerara River (*McConnell collection*); Bartica (*Whitely*); Waini River and Aremu River (*Beebe*).

Extralimital Range. South America to South-east Brazil and Paraguay, and Central America to the United States.

Habits. Schomburgk states (Reis. Guian. iii. p. 735) that this beautiful Falcon is more often found in the woods on or near the coast than in those of the interior. It is quite a common sight to see a small flock of these birds sitting on the outermost branches of a tall tree while others in graceful flight are circling round. The pearly long-forked tail, by which one can always distinguish the species at a distance, is in continuous movement during flight. It is a very shy bird. The nest, like that of most other Hawks, is composed of twigs and built on inaccessible trees. It is impossible, therefore, to see what the eggs, or newly-hatched young, are like. Its food consists of small birds and amphibia.

Mr. Lloyd Price (Timehri (2) v. p. 67) remarks:—"The

beautiful Blue-and-White Scissors-tail Hawk (*Elanoides furcatus*) may also be occasionally seen hovering high up in the air. The nest is built in the high branches of the lofty mora-trees, and the two eggs are of a glossy white."

Mr. J. J. Quelch remarks on this species as follows (Timehri (2) vi. p. 136):—"Another very common species is the Swallow-tailed or Scissor-tailed Hawk or Kite (*Elanoides furcatus*). These birds are more commonly met with in the forest-districts generally, especially on the more elevated parts, than on the coast. Along the main creeks and rivers, especially on the great reefs and ridges, they are almost always to be seen, either singly or in groups of as many as twelve or more, circling round with most exquisitely graceful motion, swooping down suddenly, and then again rising upwards in wide sweeps with arched wings and tail. It is a well-known characteristic of these birds that, if one of a flight be shot, the others will circle round and round the place where it has fallen, uttering their plaintive but shrill shrieks—at times almost swooping down upon the body as though to remove it, when it is an easy matter to procure series of specimens and possibly the whole flight. The species has a very wide range, extending to the Central States of North America and to the southern parts of Brazil; while accidental, and apparently tempest-tossed, specimens have been met with in Europe.

"The food of these birds, here, seems to consist almost entirely of insects and seeds. The winged females of the umbrella or cushie ants, the large-bodied moths, cicadas, grasshoppers, locusts, and the grubs of various species of Hymenoptera, evidently taken from the ravaged nests, make up, with seeds of the various bird-vines (*Loranthus*) and other plants, the food-contents found at various times in these Hawks."

Mr. Beebe (Our Search for a Wilderness, p. 154) gives the following note:—"While crossing the Waini several Swallow-tailed Kites soared screaming overhead, occasionally swooping past for a nearer look at us."

Genus **ROSTRHAMUS** Less.

Rostrhamus Lesson, Traité d'Orn. p. 55, 1830. Type *R. hamatus* (Illiger).

The members of this genus have the tail forked, but not so deep as that of the previous genus; the bill is slender, with a sharply-curved hook.

167. *Rostrhamus sociabilis*.

EVERGLADE KITE.

Herpetotheres sociabilis Vieill. N. Dict. d'Hist. Nat. xviii. p. 318, 1817 (Corrientes and Rio de la Plata).

Rostrhamus hamatus Cab. in Schomb. Reis. Guian. iii. p. 736, 1848.

Rostrhamus sociabilis Sharpe, Cat. B. Brit. Mus. i. p. 327, 1874; Salvin, Ibis, 1886, p. 77; Quelch, Timehri (2) vi. pp. 120, 133, 135, 1892 (habits); Brabourne & Chubb, B. S. Amer. i. p. 71, no. 656, 1912.

Rostrhamus leucopygus Sharpe, Cat. B. Brit. Mus. i. p. 328, 1874 (British Guiana).

"Sociable Kite," "Sociable Shell-eating Kite," "Cricketty Hawk" (Quelch).

Immature female. General colour above bronze-brown, with rufous or buffy-white edgings to the feathers; the primary and secondary quills banded on the inner webs with paler brown and a pinky tinge; under surface bronze-brown, the feathers broadly margined with buff; under tail-coverts uniform buff.

Total length 350 mm., culmen (including the cere) 28, wing 315, tail 167, tarsus 47, middle toe and claw 57.

The description of the bird is taken from an example collected at Mahaicoy.

We are unable to say what the plumages of the fully adult male and female are from British Guiana for want of more material. It appears, however, from a pair collected by the late Lord Brabourne in Paraguay, that the adult male has the entire head, sides of the face, and throat black, fading off into slate-grey on the back, innermost secondaries, wings, breast, abdomen, and under wing-coverts; bastard-wing, primary-coverts, and quills black, the last brown on the inner webs towards the base; upper tail-coverts and base of tail white, the latter followed by a band of greyish brown with a subapical band of the same colour, between which there is a very wide band of black, and the tips of the feathers are fringed with buffy-white; under tail-coverts white. "Iris bright crimson; bill black; feet and cere paler orange; claws black." Total length 470 mm., culmen (including the cere) 32, wing 358, tail 188, tarsus 55, middle toe and claw 53.

The adult female is similar to the adult male, but differs in the absence of slate-grey on the back, innermost secondaries, wings, breast, abdomen, and under wing-coverts, these parts being replaced by black or blackish-brown. "Iris bright crimson; bill black; feet orange; cere pale orange; claws black." Wing 340 mm.

Breeding-season. Unknown in British Guiana.

Nest. "Composed of twigs and built in tall trees which are inaccessible" (*Schomburgk*).

Eggs. Undescribed from British Guiana.

Range in British Guiana. Supenaam River, Abary River, Mahaicoy (*McConnell collection*).

Extralimital Range. Venezuela, Colombia, Peru, Brazil, Paraguay, Argentina.

Habits. According to Schomburgk (*Reis. Guian.* iii. p. 736), this bird lives entirely on the Savannas. Its favourite resting-place is on a tree at the edge of the oasis, from which it can survey the surrounding country. Its flight is easy and graceful. Its chief food appears to be amphibia and not so much birds and mammals. Schomburgk infers that the nesting-habits are the same as those of the preceding species = *Elanoides furcatus*. The "Macusis" call it *Zitow*.

Regarding this bird, Mr. J. J. Quelch writes (*Timehri* (2) vi. pp. 120, 133, 135):—"The Sociable Kite (*Rostrhamus sociabilis*) feeds chiefly on the various species of apple-snails, *Ampullaria glauca* and *A. amazonica* (see 'The Mollusca of British Guiana,' *Timehri*, vol. iv. New Series, 1890, p. 37, where the latter species is referred doubtfully to *A. papyracea*). . . . (p. 133). The Sociable Shell-eating Kite (*Rostrhamus sociabilis*), known to the old huntsmen in the Abary district by the common name of 'cricketty hawk,' the term 'cricketty' being applied to all the apple-snails (*Ampullaria*) found along the creeks or in the savannah-swamps. . . . (p. 135). As already mentioned, the food of this bird is chiefly restricted to a molluscan diet; and at times, at the edges of creeks, swamps, and savannah-pools, piles of empty shells, left by this Hawk, may be found at the foot of some low bush or stump, on which the birds had perched while feeding. Along the savannah-creeks, and especially along the Abary districts, these birds are extremely plentiful; and at sundown it will be found perched in masses at special roosting-places on the low bushes by the creek-side, or it will be seen passing overhead, seeking shelter for the night, in continuous flights of some hundreds at a time, made up of young and adult birds of both sexes. While settling down to roost by the creek-side, this species will be noticed darting down and skimming for short distances almost on the surface of the water, as though catching

insects, or splashing themselves—breast, wings, and tail—with the water itself, while uttering low and peculiar shriek-like cries. If at such times this bird is disturbed, it will wheel backwards and forwards in the dull light, close over the surface of the water, eventually to settle down on the same perches or on closely adjacent trees. As a rule, this bird is extremely fat and fleshy, and by many of the negroes is esteemed as food—attempts being made, in my experience, by individual boatmen to obtain it, even when there was an abundance of other fresh meat available.”

Genus **CHONDROHIERAX** Lesson.

Chondrohierax Lesson, *Echo du Monde Savant*, 1843, p. 61. Type *C. uncinatus* (Temm.).

Leptodon is preoccupied, consequently we have to use *Chondrohierax*.

In this genus the tail is rounded, the outer feather being the shortest and the loreal space bare.

Key to the Species.

- A. Smaller, wing less than 300 mm.; sexes different; under surface grey barred with white ♂, under surface white barred with chestnut ♀ *C. uncinatus*, p. 267.
- B. Larger, wing more than 300 mm.; sexes alike; under surface uniform dull white with a tinge of grey *C. palliatus*, p. 268.

168. **Chondrohierax uncinatus.**

RED-COLLARED KITE.

Falco uncinatus Temm. Pl. Col. i. pls. 103–105, 1824 (Rio Janeiro).

Regerhinus uncinatus Cab. in Schomb. Reis. Guian. iii. p. 736, 1848.

Leptodon uncinatus Sharpe, Cat. B. Brit. Mus. i. p. 330, 1874 (Demerara);
Salvin, Ibis, 1886, p. 77 (Camacusa); Quelch, Timehri (2) vi.
p. 138, 1892 (habits); Brabourne & Chubb, B. S. Amer. i. p. 71,
no. 658, 1912.

“Tooth-billed Kite” (Quelch).

Adult female. Sides of face and fore part of head slate-grey, becoming darker on the nape, where the bases of the feathers are

white, while those of the hind-neck are tawny; wings and back dark brown, broadly barred with paler brown on the primary and secondary quills, some of the inner primaries tinged with rufous, all the quills broadly marked with white on the inner webs towards the base; upper tail-coverts marked with grey and white; tail black, with two pale slate-grey bands, a portion of the bands on the inner web is white; entire under surface white banded with chestnut.

Total length 430 mm., culmen 29, wing 274, tail 195, tarsus 35, middle toe and claw 37.

We do not know the exact locality of the female described.

Adult male. Differs from the adult female in being slate-grey above and below, barred with white on the under surface and inner webs of the quills. Wing 273 mm.

Breeding-season. Unknown in British Guiana.

Nest. "Built of twigs in tall and inaccessible trees" (*Schomburgk*).

Eggs. Undescribed from British Guiana.

Range in British Guiana. Kamakusa (*Whitely*).

Extralimital Range. Brazil, Venezuela, Bolivia, Central America.

Habits. Schomburgk states (*Reis. Guian.* iii. p. 736) that this bird is found in similar localities to those of the previous species (*Rostrhamus sociabilis*), and the nesting-habits are also the same. Its flight is very buoyant. The "Macusis" call it *Moriro*.

Mr. J. J. Quelch (*Timehri* (2) vi. pp. 138-140) remarks on this bird as follows:—"This species, which is called the Tooth-billed Kite, seems to be of dull sluggish habit. It does not occur commonly on the coast, being more frequently taken in the low bush and along the edges of the forest-creeks, where it seems to delight in seclusion."

169. *Chondrohierax palliatus*.

CAYENNE KITE.

Falco palliatus Temm. Pl. Col. pl. 204, 1823 (Brazil and Guiana).

Odontorhynchus cayennensis Cab. in Schomb. *Reis. Guian.* iii. p. 736, 1848.

Leptodon cayennensis Sharpe, Cat. B. Brit. Mus. i. p. 333, 1874 (Demerara); Salvin, *Ibis*, 1886, p. 77 (Roraima); Quelch, *Timehri* (2) vi. pp. 138-140, 1892 (habits).

Leptodon palliatus Brabourne & Chubb, B. S. Amer. i. p. 71, no. 660, 1912.

Adult female. Head and hind-neck slate-grey, becoming paler on the sides of the face and greyish white on the throat, breast, abdomen, and under tail-coverts; thighs similar, but somewhat tinged with grey, especially on the hinder portion; axillaries and under wing-coverts black; back, wings, and tail glossy black; the upper wing-coverts, primary and secondary quills banded with grey, as are also the upper tail-coverts and tail. "Bill horn-black; feet yellow; claws horn-brown."

Total length 470 mm., culmen (including the cere) 33, wing 320, tail 222, tarsus 43, middle toe and claw 48.

The female described was collected at the Mountains of the Moon.

Adult male. Similar to the adult female but smaller. Wing 300 mm.

Another specimen, which is moulting into the fully adult plumage, has the under wing-coverts and axillaries pure white.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Bonasika River (McConnell collection); Roraima (*Whitely*).

Extralimal Range. East Peru, South-east Brazil.

Habits. Schomburgk states (Reis. Guian. iii. p. 736) that he found this bird in the virgin forests. During his stay at the Caraißen settlement he often saw it soar with graceful flight round the settlement. He did not observe it nesting.

According to Mr. J. J. Quelch (Timehri (2) vi. p. 138) the same remarks apply to this bird as to the preceding species. This species seems to be of dull sluggish habit. It does not occur commonly on the coast, being more frequently taken in the low lush and along the edges of the forest-creeks, where it appears to delight in seclusion.

Genus **ELANUS** Savigny.

Elanus Savigny, Descr. Egypt. Hist. Nat. i. p. 69, 1809. Type *E. caeruleus* (Desf.).

The members of this genus have the loreal space feathered, and the wings, when closed, reach to the end of the tail.

170. *Elanus leucurus*.

WHITE-TAILED KITE.

Milvus leucurus Vieill. N. Dict. d'Hist. Nat. xx. p. 563, 1818 (Paraguay).

Elanus leucurus Cab. in Schomb. Reis. Guian. iii. p. 735, 1848; Sharpe, Cat. B. Brit. Mus. i. p. 339, 1874 (Demerara); Salvin, Ibis, 1886, p. 76 (Roraima, 3500 ft.); Quelch, Timehri (2) vi. p. 137, 1892; Brabourne & Chubb, B. S. Amer. i. p. 72, no. 661, 1912.

"Hawk Bass," "Grey Kite" (Quelch).

Adult male. General colour above ash-grey; lesser upper wing-coverts dull blackish; inner edge of inner webs of primaries dusky brown; inner webs of secondary quills paler and inclining to white; tail for the most part white with dark shafts to the feathers, the two middle feathers grey; eyelid and feathers in front of the eye black; forehead, throat, and under surface white; the median series of the under wing-coverts blackish.

Total length 350 mm., culmen (including the cere) 23, wing 302, tail 163, tarsus 38, middle toe and claw 38.

The McConnell collection does not possess an example of this species. Of the specimens described, which are in the British Museum, the adult male was collected at the Lake of Valencia, Venezuela, in October 1868, by A. Goering, and the immature male was collected at Mount Roraima, 3000 ft., in January 1884, by H. Whitely—Salvin-Godman collection.

Immature male. Differs from the adult in being rusty brown on the hinder portion of the head, back, and scapulars, the feathers all being margined with white, as well as the tips of the primary and secondary quills, while those on the breast have pale rufous shaft-lines, giving a streaked appearance.

Breeding-season. Unknown in British Guiana.

Nest. Composed of twigs and built in tall trees (Schomburgk).

Eggs. Undescribed from British Guiana.

Range in British Guiana. Mount Roraima, 3500 ft. (Whitely); Savannas (Schomburgk).

Extralimital Range. South America generally, Central America, and Southern North America.

Habits. According to Schomburgk (Reis. Guian. iii. p. 735) this bird is common on the Savannas, where its favourite look-out is a solitary tree on the edge of the oasis, from which it can survey the surroundings. He often saw its nest, which was composed of twigs and built in tall trees. It preys on small birds and amphibia. The "Macusis" and the "Arekunas" call it *Marawia*.

Mr. J. J. Quelch remarks on this species in British Guiana (Timehri (2) vi. p. 137):—"Much less common than the preceding (*Elanoides furcatus*), and much more difficult to obtain on account of its rapid flight, is the Grey Kite (*Elanus leucurus*). This bird is not very often seen, apparently frequenting the tops of the trees in the forest and in the hilly districts, and becoming very shy of one's approach. From the length and strength of its pointed wings and tail, it cleaves the air with more rapid flight than is noticed in any other of our Hawks, and on this account and owing to its fierceness, it is said here by the old huntsmen to be more dreaded by other birds, especially by the Pigeons, than any other. From this it is known by the common name of 'Hawk Bass' (*i. e.* master); and it is noticeable that other species all seem to be in a state of alarm during the passing flight of this bird."

Genus **GAMPSONYX** Vig.

Gampsonyx Vigors, Zool. Journ. ii. p. 69, 1825. Type *G. swainsoni* Vig.

This monotypic genus is characterized by having the length of the tail less than four times that of the tarsus, and the wings, when closed, not reaching the end of the tail.

171. **Gampsonyx swainsoni.**

SWAINSON'S PEARL-KITE.

Gampsonyx swainsoni Vigors, Zool. Journ. ii. p. 69, 1825 (Bahia); Cab. in Schomb. Reis. Guian. iii. p. 735, 1848; Sharpe, Cat. B. Brit. Mus. i. p. 340, 1874; Salvin, Ibis, 1886, p. 77 (Merumé Mts.); Quelch, Timehri (2) vi. p. 140, 1892 (Savannas); Brabourne & Chubb, B. S. Amer. i. p. 62, no. 662, 1912.

"Yellow-faced Kite" (*Quelch*).

Adult male. General colour above dark brown with a tinge of slate-grey; primary and secondary quills margined with white on the inner webs, some of the secondaries fringed with white at the tips and white on both webs; tail-feathers edged with white on the inner webs except the central pair, which are uniform; fore part of head and cheeks buff; a black patch on each side of the breast; throat, breast, abdomen, and under tail-coverts white; under wing-coverts, axillaries, flanks, and thighs chestnut.

Total length 214 mm., culmen (including the cere) 15, wing 150, tail 89, tarsus 28, middle toe and claw 26.

The male described was collected by Mr. J. J. Quelch on the Rupununi Savannas on December 21, 1900.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Rupununi Savannas (*McConnell collection*) ; Merumé Mountains, Annai (*Whitely*).

Extralimital Range. Trinidad, Venezuela, Brazil, Paraguay.

Habits. According to Schomburgk (*Reis. Guian.* iii. p. 735) this bird is very rare in British Guiana. He only secured one specimen. The other individuals that he observed had the same habits as those of *Falco aurantius*. The male and female, as a rule, sat beside each other, and if the one flew away the other immediately followed. The "Macusis" and the "Arekunas" call it *Komotoh-witwi*.

Mr. J. J. Quelch (*Timehri* (2) vi. p. 140) remarks on this species as follows :—"The Yellow-faced Kite (*Gampsonyx swainsoni*). This little kite is not a coast species. It is to be found in the higher lands of the interior, where it frequents the forest, chiefly on the margins of the open savannas."

Genus **HARPAGUS** Vig.

Harpagus Vigors, *Zool. Journ.* i. p. 338, 1824. Type *H. bidentatus* (Lath.).

This genus belongs to the section of the Falcons which have two distinct teeth on the upper mandible, as will be seen by the text-figure, and a distinct central tubercle in the nostril. The wings, when closed, do not reach to the end of the tail.



Fig. 54.—To show the two teeth in the upper mandible.

172. *Harpagus bidentatus*.

DOUBLE-TOOTHED HAWK.

Falco bidentatus Lath. Ind. Orn. i. p. 38, 1790 (Cayenne).

Harpagus bidentatus Cab. in Schomb. Reis. Guian. iii. p. 734, 1848; Sharpe, Cat. B. Brit. Mus. i. p. 362, 1874 (Demerara); Salvin, Ibis, 1886, p. 77 (Bartica Grove); Quelch, Timehri (2) v. pp. 104, 105, 1891 (Georgetown); id. op. cit. vi. p. 127, 1892; Brabourne & Chubb, B. S. Amer. i. p. 72, no. 664, 1912.

“Cuckoo-Falcon” (*Quelch*).

Adult male. Crown of head, sides of face, wings, back, and upper tail-coverts slate-grey, the lesser wing-coverts, bastard-wing, and primary-coverts darker and inclining to blackish, the primary and secondary quills have dark bands and notched with white on the inner webs; the scapulars are barred with white and have twin white spots towards the tips; the lateral upper tail-coverts have a spot of white on the outer webs; tail blackish, tipped and banded with grey and white; throat white with a dark mesial streak; breast and abdomen deep chestnut barred more or less with white on the latter; under tail-coverts white; under wing-coverts buff. “Bill, upper mandible black, lower mandible light slate-colour; iris pink; legs and toes light chrome-yellow, claws black” (*H. Whitely*).

Total length 330 mm., culmen (including the cere) 23, wing 213, tail 151, tarsus 41, middle toe and claw 35.

The male described was collected on the Supenaam River.

The immature birds of this species are brown above with rufous edges to the feathers and buffy-white below with dark shaft-streaks on the breast.

Adult female. Similar to the adult male but rather larger. Wing 225 mm.

Breeding-season. Unknown in British Guiana.

Nest. Its nest is built in tall trees (*Schomburgk*).

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Ituribisi River, Supenaam River, Bartica, Kamakabra River, Bonasika River, Abary River, Anarica River (*McConnell collection*).

Extralimital Range. Venezuela, Colombia, Peru.

Habits. Schomburgk states (Reis. Guian. iii. p. 734) that this species is only found in the dense woods, where, as a rule, it sits in the tall trees, in which it builds its nest. It was often seen to

soar over the woods. The "Macusis" and the "Arekunas" call it *Umoi*.

According to Mr. J. J. Quelch (Timehri (2) vi. p. 127) "this bird is commonly distributed in the Colony, but is most frequently met with along the creeks and the open clearings in the forest along the course of the great rivers, more especially in elevated situations."

Genus **ICTINIA** Vieill.

Ictinia Vieillot, Anal. nouv. Orn. p. 24, 1816. Type *I. plumbea* (Gmel.).

The members of this genus are characterized by having but one tooth in the upper mandible and the tips of the wings, when closed, reaching to the end of the tail.

173. *Ictinia plumbea*.

PLUMBEOUS KITE.

Falco plumbeus Gmel. Syst. Nat. i. p. 283, 1788 (Cayenne).

Ictinia plumbea Cab. in Schomb. Reis. Guiana, iii. p. 735, 1848; Sharpe. Cat. B. Brit. Mus. i. p. 364, 1874; Salvin, Ibis, 1886, p. 77 (Bartica Grove); Quelch, Timehri (2) v. p. 105, 1891 (Georgetown); id. op. cit. vi. pp. 120-128, 1892; Brabourne & Chubb, B. S. Amer. i. p. 72, no. 665, 1912.

"Chicken-Hawk," "Kite-Falcon," "Pigeon-Hawk," "Snatch Hawk" (Quelch).

Adult female. Back, wings, and tail dark lead-grey; the second to the seventh primary-quills are marked more or less with bright chestnut; all the tail-feathers, except the central pair, which are uniform, have three white bars on the inner web; head, mantle, and underparts slate-grey.

Total length 340 mm., culmen (including the cere) 21, wing 317, tail 139, tarsus 38, middle toe and claw 35.

Adult male. Similar to the adult female but smaller. Wing 286 mm.

The female described was collected on the Supenaam River and the male on the Bonasika River.

Immature. Black above, the feathers tipped with white; head black with white bases and white margins to the feathers becoming dusky slate-colour on the sides of the face and throat; underparts white broadly streaked with dark brown.

The immature bird, on which the description is based, was collected at Bartica.

Breeding-season. Unknown in British Guiana.

Nest. Composed of twigs and built in a tall tree (*Schomburgk*).

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Supenaam River, Bartica, Bonasika River, Abary River, Berbice River, Mazaruni River (*McConnell collection*) ; Georgetown (*Quelch*).

Extralimital Range. South America generally to Paraguay and Central America to Mexico.

Habits. Schomburgk states (*Reis. Guian. iii. p. 735*) that the favourite haunts of this bird are the topmost branches of trees in the woods near the coast. It soars with great ease high up into the air almost out of sight, but soon returns to its favourite branch. It builds its nest of twigs in tall trees that are quite impossible to climb. The "Macusis" call it *Watatow*.

According to Mr. J. J. Quelch (*Timehri* (2) vi. pp. 120, 127, 128) the food of this bird consists almost entirely of seeds, fruits, and young leaves.

Genus **FALCO** Linn.

Falco Linné, *Syst. Nat.* 10th ed. i. p. 88. 1758. Type *F. subbuteo* Linn.

The Falcons are also distinguished by having only one tooth in the upper mandible, by their somewhat short and stout bodies,



Falco fusco-cærulescens.

Fig. 55.—To show the single tooth on the edge of the upper mandible.

and by the distance between the primary and secondary quills being more than half the length of the tail; hinder portion of tarsus reticulate. The tail is nearly square at the tip and short in proportion to the length of the wing.

Key to the Species.

- A. Upper parts paler; superciliary line and nuchal collar buff; sides of face parti-coloured; lower abdomen and sides of body rufescent buff [p. 276.
F. fusco-cærulescens,
- B. Upper parts darker; no superciliary line or nuchal collar; sides of face uniform.
- b.* Smaller, wing less than 220 mm.; breast similar in colour to the abdomen; lower abdomen, thighs, and under tail-coverts uniform in colour..... *F. rufigularis*, p. 277.
- c.* Larger, wing more than 220 mm.; breast chestnut, in contrast to the abdomen; abdomen, thighs, and under tail-coverts parti-coloured *F. deiroleucus*, p. 278.

174. *Falco fusco-cærulescens*.

APLOMADO FALCON.

Falco fusco-cærulescens Vieill. N. Dict. d'Hist. Nat. xi. p. 90, 1817 (Paraguay); Sharpe, Cat. B. Brit. Mus. i. p. 400, 1874; Brabourne & Chubb, B. S. Amer. i. p. 73, no. 669, 1912.

Hypotiorchis femoralis Cab. in Schomb. Reis. Guian. iii. p. 734, 1848; Salvin, Ibis, 1886, p. 76 (Roraima, 3500 ft.); Quelch, Timehri (2) vi. p. 129, 1892.

“Slate-backed Hobby” (*Quelch*).

Adult male. Upper parts dark slate-grey, darker on the crown of the head and sides of the face; upper tail-coverts and tail barred with white, tail-feathers blackish in contrast to the back; primary and secondary quills barred with white on the inner webs, inner primaries and secondaries margined with white at the tips; a line over and behind the eye extending round the nape, edge of wing, hinder cheeks, throat, and breast tawny-buff, the last streaked with black; abdomen and sides of body black, narrowly barred with white; axillaries and inner under wing-coverts similar, but more broadly barred or spotted with white; lower abdomen, thighs, and under tail-coverts rufescent buff. “Cere and feet yellow; bill horn-brown, yellow at base.”

Total length 340 mm., culmen (including the cere) 21, wing 240, tail 144, tarsus 55, middle toe and claw 43.

The male described was collected at Mount Roraima by Mr. McConnell in October 1898.

Adult female. Similar to the adult male in the colour of the plumage but larger in size. Wing 252 mm.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Mount Roraima, Upper Takutu Mountains (*McConnell collection*); Pirara (*Schomburgk*); Mount Roraima, 3500 ft. (*Whitely*).

Extralimital Range. South America generally and Central America.

Habits. Schomburgk states (*Reis. Guian.* iii. p. 734) that he met with this beautiful Falcon for the first time on the Savannas in the vicinity of Pirara. Its favourite haunts are solitary growing Curatella trees, also bushes, from which it soars up into the air for some time, returning to the same tree or bush. It preys on small birds and amphibia. The "Macusis" and the "Arekunas" call it *Sakuta*.

Mr. J. J. Quelch remarks on this species as follows (*Timehri* (2) vi. p. 129):—"The Slate-backed Hobby (*Hypotriorchis femoralis*) is somewhat common on the coast, being obtained about the estates and along the creeks. It is, however, widely distributed over the Colony. It is a bold and fierce bird, and, owing to its long wings and tail, is characterized by a rapid and even sailing flight."

175. *Falco rufigularis*.

WHITE-THROATED BAT-FALCON.

Falco rufigularis Daud. *Traité*, ii. p. 131, 1800 (Cayenne); Brabourne & Chubb, *B. S. Amer.* i. p. 73, no. 671, 1912.

Falco aurantius Cab. in Schomb. *Reis. Guian.* iii. p. 733, 1848.

Falco albigularis Sharpe, *Cat. B. Brit. Mus.* i. p. 401, 1874 (Demerara).

Hypotriorchis rufigularis Salvin, *Ibis*, 1886, p. 76 (Bartica Grove, Camacusa, Roraima, 3500 ft.); Quelch, *Timehri* (2) vi. p. 129, 1892.

"Red-throated Hobby" or "Baridie Hawk" (*Quelch*).

Adult female. General colour above black with dark slate-grey bars and margins to the feathers, darker on the head and paler on the wings and back; primary and secondary quills barred or spotted with white on the inner webs; middle tail-feathers and outer webs of the outer pair of feathers barred with slate-grey, edged with white at the tips, remainder of the tail-feathers (including the inner webs of the outer feathers) barred and tipped with white; sides of face black; chin and throat white washed with rufous, becoming darker rufous on the fore-neck and sides of the neck; breast, upper abdomen, and sides of body black barred and edged with white at the tips of the feathers; axillaries and under wing-coverts black spotted with white; lower abdomen, thighs, and under tail-coverts chestnut.

Total length 265 mm., culmen (including the cere) 17, wing 207, tail 104, tarsus 35, middle toe and claw 42.

Adult male. Similar in plumage to the adult female, but smaller. "Feet yellow; bill deep bluish black, yellow at base."

Total length 242 mm., culmen (including the cere) 15, wing 182, tail 91, tarsus 35, middle toe and claw 34.

The male and female described were collected on the Kamakabra River in 1911.

Breeding-season. Unknown in British Guiana.

Nest. Composed of twigs and built in trees (*Schomburgk*).

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Ituribisi River, Supenaam River, Bartica, Kamakabra River, Bonasika River, Curubung River, Essequibo River (*McConnell collection*); Bartica, Kamakusa, Mount Roraima, 3500 ft. (*Whitely*).

Extralimital Range. South America generally to Argentina and Central America.

Habits. Schomburgk states (*Reis. Guian.* iii. p. 733) that he found this beautiful Falcon mostly in pairs, and perching on the withered branches of trees growing on the river-banks. The male and female are alike, only the female is rather larger than the male. Its food consists of snakes, lizards, and small birds. It usually calls when flying away from its resting-place. The nest is composed of twigs and built on trees. The 'Macusis' call it *Teu-teu*."

Mr. J. J. Quelch makes the following remarks on this species (*Timehri* (2) vi. p. 129):—"The commonest of the Falcons, however, is the little Red-throated Hobby or Baridie Hawk (*Hypotriorchis ruficularis*), which is so frequently met with perched on the tall dead limbs of the trees along the banks of our creeks and rivers and in the open clearings in the forest. The food of this species is of a very mixed kind, consisting of small mammals, birds, reptiles, and insects, and it will often be observed darting from its lofty perch at its prey and returning to the same point to devour what it has caught—just as will so often be noted in the case of the Falcon-Kite and the Great-billed Buzzard."

176. *Falco deiroleucus*.

ORANGE-BREASTED FALCON.

Falco deiroleucus Temm. Pl. Col. i. pl. 368, 1825 (Brazil); Brabourne & Chubb, B. S. Amer. i. p. 73, no. 671, 1912.

Falco aurantius Sharpe, Cat. B. Brit. Mus. i. p. 402, 1874 (Demerara); Quelch, *Timehri* (2) vi. p. 130, 1892.

Adult male. Upper surface and sides of face black, some of the feathers edged with dark slate-colour; primary and secondary quills spotted or barred with white on the inner webs, the secondaries and some of the inner primaries edged with white at the tips; upper tail-coverts and tail barred and tipped with white; throat white; sides of neck and breast bright chestnut, with a few black shaft-streaks on the latter; abdomen, sides of body, axillaries, and under wing-coverts black, barred or spotted with white; lower abdomen, flanks, and thighs chestnut barred with buff and black; under tail-coverts buff barred with black.

Total length 320 mm., culmen (including the cere) 21, wing 240, tail 111, tarsus 35, middle toe and claw 55.

The description of the male is taken from an example collected on the Demerara River.

Adult female. Similar to the adult male and differing only in its larger measurement. Wing 275 mm.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Demerara River (*McConnell collection*).

Extralimital Range. South America generally to Southern Brazil and Central America to Guatemala.

Habits. Mr. J. J. Quelch remarks on this species as follows (*Timehri* (2) vi. p. 130):—"The Orange-breasted Falcon (*Falco aurantius*). This is the chief representative here of those noble Birds of Prey which during the Middle Ages were so famous in the pastime of falconry. It might, indeed, be called the South American Peregrine. This is the first record of this species from the Colony."

Genus **CERCHNEIS** Boie.

Cerchneis Boie, *Isis*, 1826, p. 970 (976). Type *C. ruficollis* (Daud.).

The Kestrels are, for the most part, rufous in plumage and somewhat long and slender in form. The tail is rounded at the tip and long in proportion to the length of the wing.

177. *Cerchneis isabellina*.

ISABELLINE KESTREL.

Falco isabellinus Swains. *Anim. in Menag.* p. 281, 1837 (Demerara).

Cerchneis sparverius (nec Linn.), Cab. in Schomb. *Reis. Guian.* iii. p. 734, 1848.

Cerchneis isabellina Sharpe, Cat. B. Brit. Mus. i. p. 441, 1874 (British Guiana); Brabourne & Chubb, B. S. Amer. i. p. 73, no. 678, 1912.
Tinnunculus isabellinus Salvin, Ibis, 1886. p. 76 (Roraima, 3500 ft.);
 Quelch, Timehri (2) vi. p. 131, 1892 (habits).

Adult female. Back, scapulars, innermost secondaries, and middle tail-feathers cinnamon-rufous, the last with a broad sub-terminal black band and white tips, the outer pair of feathers white with black bars; the long scapulars and innermost secondaries banded with black subterminally; top of head and upper wing-coverts slate-grey, the latter marked with black; primary-quills blackish marked with white, the secondaries slate-grey marked with black and white; sides of face, throat, under wing-coverts, thighs, and under tail-coverts white; a black bar on the fore-cheeks and another broader one on the hinder part of the face; breast, abdomen, and sides of body isabelline-rufous; axillaries dusky brown barred with white. "Bill horn-blue, yellowish at base of both mandibles."

Total length 255 mm., culmen (including the cere) 13, wing 184, tail 124, tarsus 35, middle toe and claw 27.

The female described was collected on the Rupununi Savannas in December 1900.

Adult male. Similar to the adult female but smaller. Wing 176 mm.

The male from which the description is taken was collected at Mount Roraima.

Young birds differ from the adults in being regularly barred above and streaked below.

Breeding-season. Unrecorded in British Guiana.

Nest. "Composed of twigs and built on fairly high trees" (*Schomburgk*).

Eggs. "It lays three eggs" (*Schomburgk*).

Range in British Guiana. Mount Roraima, Upper Takutu Mountains, Rupununi Savannas (*McConnell collection*).

Extralimital Range. Venezuela, Margarita Island, Colombia and Ecuador, East of the Andes.

Habits. *Schomburgk* (Reis. Guian. iii. p. 734) states that he found this bird very plentiful on the Savannas. Its favourite place of outlook was the termite-hills, small trees, and bushes; from these it darts out for its prey, which consists of small birds, insects, and amphibia. Like *F. jemoralis* = *Falco fusco-caerulescens*,

it now and then flies up into the air and returns again to its resting-place. The immediate surroundings of its look-out are most vigorously defended against all intruders, even larger Falcons being driven away. Its nest is composed of twigs and built on fairly high trees in the oasis; it lays three eggs. The natives keep it in captivity, and it becomes very tame. The "Macusis" call it *Kiririh*.

We quote the following notes by Mr. J. J. Quelch (Timehri (2) vi. p. 131):—"This Kestrel seems not to occur on the coast, being apparently confined to the open savannahs and higher lands, where it is generally met with, like its English congener, the Wind-hover, poised on the wing, hovering, while seeking for the small mammals, reptiles, insects, etc., on which it chiefly feeds. Though a fierce and rapacious creature, this little Hawk is slenderly and slightly built, being the most delicate-looking of all our species."

Genus **PANDION** Savigny.

Pandion Savigny, Deser. Egypt, Hist. Nat. i. p. 69, 1809. Type *P. haliaëtus* (Linn.).

This genus is distinguished by having the outer toe reversible, the soles of the feet provided with small spicules, very short tarsi, and long tibia.

178. *Pandion carolinensis*.

AMERICAN OSPREY.

Falco carolinensis Gmel. Syst. Nat. i. p. 263, 1788 (Carolina).

Pandion haliaëtus Sharpe, Cat. B. Brit. Mus. i. p. 449, 1874; Quelch, Timehri (2) vi. pp. 161, 162, 1892 (Abary River).

Haliaëtus carolinensis Beebe, Our Search for a Wilderness, p. 156, 1910 (Waini River).

Pandion carolinensis Brabourne & Chubb, B. S. Amer. i. p. 74, no. 679, 1912.

"Fish-Hawk" (Quelch).

Immature female. General colour above, including the entire back, scapulars, wings, and tail, brown with white bases, bars, and edgings to many of the feathers, the tail regularly barred with paler brown and white; the head white or buffy-white with brown shaft-streaks and an occipital crest of brown feathers. Throat and entire under surface creamy-white with dark shaft-lines and lanceolate spots on the fore-neck and brown markings on the

axillaries and lower flank-feathers; outer under wing-coverts brown edged with white.

Total length 570 mm., culmen (including the cere) 37, wing 485, tail 215, tarsus 55, middle toe and claw 72.

The bird described was collected on the Barima River.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Barima River, Abary River (McConnell collection); Waini River (Beebe).

Extralimital Range. Venezuela, Antilles, Central and North America.

Habits. Mr. J. J. Quelch remarks on this species as follows (Timehri (2) vi. p. 161):—"The Common Osprey (*Pandion haliaetus*), which is known commonly here by the name 'Fish-Hawk.' They are said to be common all along the low and water savannahs of the coast, but I have met with them only along the Abary Creek, where, especially in the wet season when the country is flooded by some three or four feet of water, these Hawks are met with all over the district, sailing along with rapid flight, or hovering, almost quite stationary, for a moment, and then darting, as though shot downwards into the water, to seize some fish that they have espied. Comparatively large fishes are thus seized by the birds, which seldom, if ever, miss the prey at which they have darted. I have never observed them perching in the day; but one was shot while perching at night on the top of a tall dead branch that projected high up in the air, immediately over the rough benab in which we had camped on Tiger Island, along the Abary Creek. The Osprey ranges nearly all over the world, but this is the first direct record of its occurrence in British Guiana."

Order STRIGIFORMES.

Family STRIGIDÆ.

The Owls are peculiar by their very full and soft plumage, their large eyes, and facial discs.

They are distributed in nearly all parts of the known world. Twelve genera and forty-eight species occur in South America, nine genera and ten species being represented in British Guiana.

Genus **ASIO** Briss.

Asio Brisson, Orn. i. p. 477, 1760. Type *A. otus* Linné.

This genus is distinguished by the distinct tufts of feathers on the sides of the head and in having the cere longer than the culmen.

179. *Asio clamator*.

CAYENNE OWL.

Bubo clamator Vieill. Ois. Amér. Sept. i. p. 52, pl. 20, 1807 (Cayenne).

Asio mexicanus Sharpe, Cat. B. Brit. Mus. ii. p. 231, 1875.

Asio clamator Brabourne & Chubb, B. S. Amer. i. p. 74, no. 650, 1912.

Adult male. General colour of the upper surface rufescent buff, including the crown of the head, back, wings, and tail, broadly streaked and finely vermiculated with brown on the head, back, and upper wing-coverts, barred and vermiculated with the same colour on the flight-quills and tail; a crescentic line of white on the forehead; lores, hinder cheeks, and chin white; a spot in front and below the eye and a patch on the throat rufous; a dark brown line from above and behind the eye encircling the throat; fore-neck for the most part white with dark tips to the feathers; remainder of the under surface sandy-buff broadly streaked with black on the abdomen and sides of the body.

Total length 345 mm., culmen 34, wing 235, tail 129, tarsus 50, middle toe and claw 48.

We do not know the exact locality in the Colony of the male described.

Adult female. General colour above and below buff, broadly streaked and mottled with dark brown and large ovate spots of white on some of the upper wing-coverts; primary-coverts dark brown; crown of head and nape brighter and more orange-buff; ear-tufts margined on the inner webs with orange-buff; base of forehead and facial disc white, the latter more or less intermixed with rust-colour and the feathers tipped with blackish on the outer edges, which forms a circular margin on the hinder face; the feathers surrounding the eyes and nostrils are bristle-like and coloured black and white; the feathers on the middle of the breast and abdomen have a great deal of white on the inner webs; the feathers on the toes have dark shaft-lines.

Total length 380 mm., ear-tufts 57, culmen 33, wing 260, tail 134, tarsus 65.

The description of the female is taken from an example in the British Museum collected by "Spence" in Venezuela—Salvin-Godman collection. There is also an example in the National Collection, from British Guiana, which is much darker and more inclining to tawny or orange-buff, but from its small size I imagine it to be a young bird.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Demerara (*McConnell collection*).

Extralimital Range. Colombia, Peru, Brazil, Paraguay, and Panama in Central America.

Habits. Unrecorded in British Guiana.

Genus **BUBO** Dum.

Bubo Duméril, Zool. Analyt. 1806, p. 34. Type *B. bubo* Linné.

The members that constitute this genus are large birds with conspicuous ear-tufts on the sides of the head. The wings are comparatively short, and the tarsi are always feathered.



Fig. 56.—To show the large ear-tufts.



Fig. 57.—To illustrate the form of the foot and the fourth toe, which is reversible.

180. *Bubo scotinus*.

VENEZUELAN HORNED OWL.

Bubo scotinus Oberholser, Mus. Brooklyn Inst. Arts & Sci. Bull. i. no. 14, p. 371, Sept. 1908 (Caicare, Orinoco); Brabourne & Chubb, B. S. Amer. i. p. 74, no. 686, 1912.

Bubo virginianus Cab. in Schomb. Reis. Guian. iii. p. 733, 1848; Salvin, Ibis, 1886, p. 70.

Adult male. General colour of the upper surface brown, vermiculated and mottled with dull white and buffy-white; quills and outer tail-feathers broadly barred with buff, the bars inclining to white on the middle ones; ear-tufts blackish, edged with buff; hinder portion of facial disc rufous and margined with dark brown; under surface of body brown, barred with white or sandy-buff. "Bill black; toes ashy; claws horn-colour, black at the ends; iris gamboge-yellow."

Total length 465 mm., culmen 45, wing 355, tail 180, tarsus 62, middle toe and claw 65.

The male from which the description is taken was collected at the Takutu Mountains.

Adult female. Similar to the adult male both in colour of plumage and measurements.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Takutu Mountains (*McConnell collection*); Pirara (*Schomburgk*); Annai (*Whitely*).

Extralimital Range. Venezuela.

Schomburgk states (*Reis. Guian.* iii. p. 733) that he obtained an example of this large Owl in the vicinity of Pirara. It roosts during the day among the dense foliage of large trees growing in the oasis. Towards dusk it starts hunting. Even some of the larger mammals, such as Agutis and Labas, are among its prey. The strength of its talons is very great. He did not know anything about its nesting-habits. The "Macusis" call it *Pusika* and the "Warraus" *Wokoboko*.

Genus **PULSATRIX** Kaup.

Pulsatrix Kaup, *Isis*, 1848, p. 771. Type *P. torquata* (Daud.).

This genus is distinguished by the feathered toes.

181. *Pulsatrix perspicillata*.

SPECTACLED OWL.

Strix perspicillata Lath. *Ind. Orn.* i. p. 58, 1790 (Cayenne).

Athene torquata Cab. in *Schomb. Reis. Guian.* iii. p. 732, 1848.

Syrnium perspicillatum Sharpe, *Cat. B. Brit. Mus.* ii. p. 277, 1875.

Pulsatrix torquata Salvin, *Ibis*, 1886, p. 71 (Bartica Grove); Quelch, *Timehri* (2) v. p. 103, 1891 (Georgetown).

Pulsatrix perspicillata Brabourne & Chubb, *B. S. Amer.* i. p. 75, no. 688, 1912.

Adult male. General colour of the upper parts sooty-black, somewhat paler on the quills, which are banded with paler brown and barred on the inner webs with white towards the base; tail-feathers also banded with paler brown, notched with white on the inner webs and edged with white at the tips; crown of head, nape, sides of face, and throat black; frontal bristles, a line over the eye encircling the cheeks, and a large patch on the fore-neck white; breast sooty-black; under wing-coverts, edge of wing, and remainder of the under surface sandy-buff.

Total length 443 mm., culmen 38, wing 323, tail 181, tarsus 57, middle toe and claw 47.

Adult female. Similar to the adult male, but somewhat larger in size. Wing 345 mm.

Breeding-season. Unknown in British Guiana.

Nest. Is said to build in hollow trees (*Schomburgk*).

Eggs. Undescribed from British Guiana.

Range in British Guiana. Supenaam River, Bonasika River (McConnell collection); near Roraima (Schomburgk); Bartica (Whitely); Georgetown (Quelch).

Extralimital Range. Eastern and Southern Brazil and (according to the 'Catalogue of the Birds in the British Museum,' ii. p. 279) Bolivia. Central America to Mexico.

Habits. According to Schomburgk (Reis. Guian. iii. p. 732) this bird was distributed over the whole of British Guiana. He obtained it in the woods near the coast and also near Roraima. It roosts during the day in the depths of the woods and at sunset sallies forth for food. Its usual haunts were the borders of the rivers, where it was often seen to fly along close to the water. It appeared to be very fond of fresh-water shrimps which crawl on the water's edge. The plumage of the young bird is prettier than the adult, as it has the face black and the remainder of the plumage pure white. The full plumage is not obtained until the second or third year. He did not find its nest, but it is said to build in hollow trees.

Mr. J. J. Quelch, who observed this species in Georgetown, remarks (Timehri (2) v. p. 103):—"The third form, the Spectacled Owl (*Pulsatrix torquata*), is also a large bird, of about 20 inches or more in length. Its eyes are of a deep yellow or orange-yellow. The young birds are covered chiefly with fluffy white down, changing to dark or blackish brown above, and yellowish or pale reddish brown below, while a white streak marks out the facial disk like a spectacle, and a dark brown band girdles the neck and breast like a collar. These birds have only been met on the outskirts of the town."

Genus OTUS Penn.

Otus Pennant, Indian Zoology, p. 3, 1769. Type *O. bakkamæna* Penn.

This genus is easily recognized by the small size of its members, the extended ear-tufts, and the proportionately long wings which extend, when closed, almost to the tip of the tail.

182. *Otus crucigerus*.

SPIX'S SCOPS OWL.

Strix crucigera Spix, Av. Bras. i. p. 22, pl. ix. 1824 ("juxta flumina Amazonum").

Scops choliba (nec Vieill.), Cab. in Schomb. Reis. Guian. iii. p. 733, 1848.

Scops brasiliensis Sharpe, Cat. B. Brit. Mus. ii. p. 108, 1875; Salvin, Ibis, 1886, p. 71 (Roraima, 3500 ft.); Lloyd, Timehri (2) xi. p. 9, 1897 (Roraima).

Scops roraimæ Salvin, Bull. Brit. Orn. Club, vi. p. 38, 1897 (Roraima).

Otus roraimæ Brabourne & Chubb, B. S. Amer. i. p. 75, no. 694, 1912.

? *Scops asio* Cab. in Schomb. Reis. Guian. iii. p. 733, 1848.

Otus crucigerus Brabourne & Chubb, B. S. Amer. i. p. 75, no. 692, 1912.

“Little Scops Owl” (*Lloyd*.)

Adult male (brown phase). General colour of the upper surface dusky brown with indistinct darker lines, buff frecklings, and white spots; outer webs of outer scapulars pure white; quills and tail-feathers much more coarsely marked, but the colours similar; feathers of the facial disc whitish, minutely barred with brown; under surface white with blackish longitudinal lines and mottled cross-bars; under wing-coverts and thighs buff with minute dark markings.

Total length 220 mm., culmen 22, wing 175, tail 78, tarsus 33, middle toe and claw 26.

The male described was collected at Bartica.

There is, in the McConnell collection, an example of the bright rufous phase with the dark markings distributed much the same as those in the bird described, and another from the Abary River which is intermediate in colour between the two.

We have examined the type of *O. roraimæ* (Salvin), which is in the British Museum, and we are of the opinion that the characters given for its separation are not tenable and it must, therefore, be regarded as a synonym of *O. crucigerus* Spix.

Breeding-season. Unknown in British Guiana.

Nest. “In holes of trees” (*C. A. Lloyd*).

Eggs. “Said to lay one to two eggs” (*C. A. Lloyd*).

Range in British Guiana. Bartica, Abary River (*McConnell* collection); Mount Roraima, 3500 ft. (*Whitely*).

Extralimital Range. Venezuela, Margarita Island, Colombia, Eastern Peru.

Habits. Schomburgk states (Reis. Guian. iii. p. 733), under the name of *Scops asio*, that he found it in the woods and that the “Macusis” call it *Kerepunuma* and the “Waraus” *Muro*.

Mr. C. A. Lloyd (Timehri (2) xi. p. 9) remarks on this species

as follows :—"The little Scops Owl, *Scops brasiliensis*, is a common Savannah bird. There appears to be two distinct varieties of this little Owl—one very dark and the other a light brown. This phenomenon in Zoology is known as dichromatism, and is one of the most difficult problems to solve. It would seem that neither climate nor locality has much to do with it, since both varieties are met with on the Savannah. The Scops Owl breeds in holes in trees and is said to lay from one to two eggs."

Genus **LOPHOSTRIX** Less.

Lophotrix Lesson, Compl. Buff. vii. p. 261, 1836. Type *L. cristata* (Daud.).

This monotypic genus is easily distinguished from *Otus* by the much larger size, the peculiar freckled plumage, and the very long ear-tufts.

183. *Lophotrix cristata*.

CRESTED OWL.

Strix cristata Daud. Traité, ii. p. 207, 1800 (Guiana).

Scops cristatus Sharpe, Cat. B. Brit. Mus. ii. p. 122, 1875; Quelch, Timehri (2) v. p. 102, 1891 (Georgetown).

Lophotrix cristata Brabourne & Chubb, B. S. Amer. i. p. 76, no. 699, 1912.

Adult male. General colour above and below dark brown, everywhere minutely freckled with rufous and, more or less, interspersed with white, which assumes the form of spots on the upper wing-coverts, bars on the flight-quills and tail-feathers, and frecklings on the forehead, breast, and abdomen; eyebrow and ear-tufts white, with an admixture of dark brown on the latter; hinder crown and nape darker and contrasting with the back; sides of face and upper eyelid bright chestnut; chin similar, but duller; axillaries and under wing-coverts cinnamon-buff.

Total length 430 mm., culmen 31, wing 303, tail 184, tarsus 44.

This species is not represented in the McConnell collection, and the description of the male is taken from an example in the British Museum collected by H. Whitely at Yquitos, East Peru, on October 2nd, 1878—Salvin-Godman collection.

Adult female. Similar to the adult male.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Georgetown (*Quelch*).

Extrolimal Range. North-east Brazil, East Peru, Ecuador.

Habits. Mr. J. J. Quelch, who observed this species in Georgetown, remarks (*Timehri* (2) v. p. 102):—"The second species (*Scops cristatus*) has been met with but once in my experience, when two young ones were taken from the loft of a house in Brickdam."

Genus **CICCABA** Wagl.

Ciccaba Wagler, *Isis*, 1832, p. 1222. Type *C. huhula* (Daud.).

This genus is distinguished chiefly by the unfeathered toes.

Key to the Species.

- A. Rufous-brown above, barred with paler rufous and dark brown; under surface sandy buff marked with bright tawny *C. superciliaris macconnelli*, [p. 290.]
- B. Black above, narrowly barred with white; under surface also black, but more broadly banded with white *C. huhula*, [p. 291.]

184. *Ciccaba superciliaris macconnelli*, n. subsp.

McCONNELL'S GUIANA WOOD-OWL.

Ciccaba superciliaris (nec Pelz.), Salvin, *Ibis*, 1886, p. 71 (Camacusa, Roraima, 3500 ft.); Brabourne & Chubb, *B. S. Amer.* i. p. 76, no. 705, 1912.

Adult male. General colour above brown with rufous cross-bars and mottlings to the feathers, including the back, scapulars, upper tail-coverts, and upper wing-coverts; bastard-wing, primary-coverts, flight-quills, and tail-feathers more broadly banded with tawny-brown mottlings; crown of head, nape, and sides of neck darker than the back and inclining to black; superciliary streak buffy-white; the bristly feathers which surround the bill white with black shafts; sides of face and throat ferruginous barred with brown; breast and remainder of the under surface tawny-buff barred or mottled with brown; axillaries tinged with cinnamon.

Total length 325 mm., culmen 31, wing 238, tail 137, tarsus 41.

The type was collected on the Ituribisi River in October 1908, and is in the McConnell collection.

This subspecies differs from *C. superviliaris* in being rufous-brown above instead of dusky brown, outer edge of scapulars sandy buff instead of white, and the under surface sandy buff marked with bright tawny instead of white with dark brown markings and shaft-streaks of the same colour.

Breeding-season. Unknown.

Nest. Unrecorded.

Eggs. Undescribed.

Range. Confined to British Guiana: Berbice River, Ituribisi River (*McConnell collection*); Kamakusa, Roraima, 3500 ft. (*Whitely*).

Habits. Unrecorded.

185. *Ciccaba huhula*.

DARK WOOD-OWL.

Strix huhula Daud. Traité, ii. p. 190, 1800 (Cayenne).

Athene lineata Cab. in Schomb. Reis. Guian. iii. p. 732, 1848.

Syrnium huhulum Sharpe, Cat. B. Brit. Mus. ii. p. 275, 1875.

Ciccaba huhula Salvin, Ibis, 1886, p. 71 (Merumé Mts.); Brabourne & Chubb, B. S. Amer. i. p. 77, no. 708, 1912.

Adult female. General colour above and below blackish brown, everywhere barred with white, narrowly on the upper surface and more broadly on the lower parts; the white pattern on the tail-feathers is, in some cases, diagonal; the head is darker than the back and the white markings much smaller; chin black; legs much more narrowly barred than the abdomen.

Total length 350 mm., culmen 32, wing 245, tail 151, tarsus 48, middle toe and claw 42.

The description of the female is based on a specimen collected on the Ituribisi River.

Adult male. Similar to the adult female, but rather larger. Wing 254 mm.

“Bill chrome-yellow; eye dark brown; feet chrome-yellow, claws pale chrome-yellow” (*H. Whitely*).

The description of the male is taken from an example in the British Museum, collected by Whitely at the Merumé Mountains in June 1881—Salvin-Godman collection.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River (McConnell collection); Merume Mountains (Whately); Canuku Mountains (Schomburgk).

Extralimital Range. Brazil.

Habits. Schomburgk states (Reis. Guian. iii. p. 732) that he shot this bird on the Canuku Mountains. It was flying about during the day mobbed by a lot of other birds. This species, like the former (= *Psittacus perspicillatus*), does not attain its full plumage until the second or third year. Its nidification is unknown.

Genus **SPEOTYTO** Glog.

Speotyto Gloger. Hand. u. Hilsfb. p. 226, 1841. Type *S. cunicularia* (Molina).

The distinguishing character of this genus is the unfeathered tarsi and toes.

186. **Speotyto brachyptera.**

SHORT-WINGED BURROWING OWL.

Speotyto brachyptera Richm. Proc. U.S. Nat. Mus. xxviii. p. 663, 1895 (Margarita Island); Brabourne & Chubb, B. S. Amer. i. p. 77, no. 715, 1912.

Athene cunicularia (nec Mol.), Cab. in Schomb. Reis. Guian. iii. p. 731, 1848.

Speotyto cunicularia (nec Mol.), Salvin, Ibis, 1886, p. 71.

Adult male. General colour above earth-brown, the feathers everywhere spotted with white; feathers above the eye and on the hinder cheeks, as well as those on the chin, white—a line across the fore-neck also white; remainder of the under surface buffy-white with rufous-brown cross-bars.

Total length 220 mm., culmen 16, wing 150, tail 65, tarsus 47, middle toe and claw 26.

The description of the male is based on an example collected on the Rupununi Savannas.

Adult female. Like the adult male. Wing 140 mm.

The female examined by us is in the British Museum, and was collected by Dr. P. R. Lowe on Margarita Island on the 22nd March, 1906.

Breeding-season. Unknown in British Guiana.

Nest. It nests in the excavations made by the armadillos and ant-bears (Schomburgk).

Eggs. It lays two or three white eggs (Schomburgk).

Range in British Guiana. Upper Takutu Mountains, Rupununi Savannas (McConnell collection).

Extralimital Range. Venezuela, Margarita Island.

Habits. Schomburgk states (Reis. Guian. iii. p. 731) that he only met with this peculiar Owl on the Savannas which were overgrown with short grass. It was to be seen during the whole day. As soon as it saw anything that appeared dangerous, it stretched itself out, bobbed its head up and down, and flew off. It only flies for a short distance, when it goes through similar movements again: it often runs for a short distance before commencing to fly, when it utters its whistling note. It is very shy and difficult to shoot. Its greyish-brown colour harmonises perfectly with the dry grass, and is perfectly hidden when squatting. Its yellow eyes are very conspicuous in the sun-light. It rests in the termite-hills. It does not excavate the hollows itself, but selects the excavations made by the armadillos and ant-bears, as may be seen by the fact that the scratchings by these animals in the excavations are clearly visible. Its food consists of insects and small reptiles. It lays two or three white eggs, and the owlets soon leave the nest. The "Macusis" call it *Bokoba* and the "Paravilhanos" *Sirupow*.

Genus **GLAUCIDIUM** Boie.

Glaucidium Boie, Isis, 1826. p. 970 (976). Type *G. nanum* (King).

The birds of this genus are very small, the cere is inflated, the wing is rounded, and the middle toe is about equal in length to that of the tarsus.

187. *Glaucidium phalænoides*.

TRINIDAD PYGMY OWL.

Strix phalænoides Daud. Traité, ii. p. 206, 1800 (Trinidad).

Athene passerinoides (nec Temm.), Cab. in Schomb. Reis. Guian. iii. p. 731, 1848.

Glaucidium phalænoides Sharpe. Cat. B. Brit. Mus. ii. p. 203. 1875:

Salvin, Ibis, 1886, p. 72 (Merumé Mts., Roraima, 3500 ft.);

Brabourne & Chubb, B. S. Amer. i. p. 78, no. 721, 1912.

Glaucidium pumilum (nec Temm.), Salvin, Ibis, 1886, p. 72 (Camacusa).

Adult male. Back, scapulars, upper wing-coverts, and upper tail-coverts sepia-brown, the scapulars and wing-coverts spotted with white; tail-feathers spotted on both webs with white and dark brown; quills banded with dark brown and notched with white on the inner webs; head dusky brown, streaked and spotted with white; sides of face similar, but with more white; under surface

similar in colour to the back, broadly streaked with white on the abdomen and sides of the body; under wing-coverts buffy-white with dark markings. "Bill horn-colour; eye straw-colour; feet greenish-yellow, claws black" (*H. Whitely*).

Total length 159 mm., culmen 13, wing 95, tail 55, tarsus 21, middle toe and claw 22.

The male specimen from which the description is taken was collected at the Takutu Mountains.

Adult female. Similar to the adult male, but appears to be slightly larger in size. Wing 105 mm. "Eye yellow; bill green streaked with yellow; feet yellowish-green; underneath yellow; claws black" (*H. Whitely*).

We have examined a series of nine males and two females of this species in the British Museum, which was collected by Whitely in British Guiana during the months of January, March, June, July, September, November, and December, and notice that the colour of plumage varies from dusky brown to cinnamon-rufous.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains (*McConnell* collection); Mount Roraima, 3500 ft., Merumé Mountains, Annai, Quonga, Kamakusa (*Whitely*); Pirara (*Schomburgk*).

Extralimital Range. Venezuela, Margarita Island, Trinidad.

Habits. Schomburgk states (*Reis. Guian.* iii. p. 731) that the first specimen he obtained of this small Owl was on the banks of the Takutu River, though he had often heard its melancholy note. It preferred the dense woods and shrubs, and often uttered its note during the daytime. In Pirara an old Indian had taken three young ones from a hollow tree. They were absolutely tame, and were as lively during the day as in the evening. The "Macusis" call it *Daetnow* and the "Arekunas" *Daiwoh*.

Genus **TYTO** Billb.

Tyto Billberg, *Synop. Faunæ Scand.* vol. i. part ii. tab. A, 1828. Type *T. alba* Scopoli.

This genus may be distinguished by the long wings, which when closed reach much beyond the tip of the tail, in having the lower portion of the tarsi almost naked, and the tarsus about twice the length of that of the culmen.

188. *Tyto perlata*.

BRAZILIAN BARN-OWL.

Strix perlata Licht. Verz. Doubl. p. 59, 1823 ("Brasil"); Cab. in Schomb. Reis. Guian. iii. p. 732, 1848.

Strix flammea (nec Linn.), Salvin, Ibis, 1886, p. 70 (Roraima, 4000 ft.); Quelch, Timehri (2) v. p. 102, 1891 (Georgetown).

Tyto perlata Brabourne & Chubb, B. S. Amer. i. p. 78, no. 724, 1912.

Adult. Upper surface dusky brown, finely speckled with white and minute lanceolate white markings, everywhere tinged with orange-buff or sandy-buff; flight-quills and tail-feathers broadly barred and dusted with brown; facial disc white tipped with orange-buff, some of the feathers edged with blackish brown, the feathers more closely surrounding the eye and base of the bill disintegrated and bristly in texture and those in front of the eye smoky-brown in colour; underparts silky-white, spotted with pale brown, and more or less tinged with buff. "Bill white; eye black; legs, toes, and claws faintish black" (*H. Whitely*).

Total length 325 mm., culmen (from the base of the skull) 38, wing 338, tail 134, tarsus 78, middle toe and claw 54.

The bird from which the description is taken was collected by Mr. McConnell at Mount Roraima in October 1898.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Mount Roraima, Upper Takutu Mountains (*McConnell collection*); Mount Roraima, 4000 ft. (*Whitely*); Georgetown (*Quelch*).

Extralimital Range. Brazil, East Peru.

Habits. Schomburgk states (Reis. Guian. iii. p. 732) that he only found this bird near the coast, where it seemed to prefer human dwellings.

Mr. J. J. Quelch observed this species in Georgetown, and remarks (Timehri (2) v. p. 102):—"Three kinds of Owls will occasionally be met with, one of which, the ubiquitous Barn or Screech Owl (*Strix flammea*), is extremely common, especially about the churches and the larger houses on the outskirts."

Order **PSITTACIFORMES.**Family **PSITTACIDÆ.**

The Parrots inhabit chiefly the tropical and subtropical portions of Africa, Asia, Australasia, West India Islands, Central and South America.

They vary in size from that of a Pheasant to a Marsh-Tit or Common Wren. Their plumage is rather harsh and combines all the brightest of colours. They nest in holes in trees and lay white eggs. Their bills are very powerful (for crushing hard substances) and their feet are zygodactile or yoke-footed.

There are twenty-three genera and one hundred and sixty-five species in South America; thirteen genera and thirty-three species are represented in British Guiana.

Genus **ARA** Lacep.

Ara Lacepède, Tableau Oiseaux, p. 19, 1799. Type *A. macao* (Linn.).

This genus is distinguished by the naked lores, large bill, the very long and graduated tail, and in having the orbital ring complete.

Key to the Species.

- A. Larger, wing more than 300 mm.
 - a. Upper surface entirely blue; lower parts yellow *A. ararauna*, p. 297.
 - b. Upper surface red and blue; lower parts almost entirely red.
 - a'. Head and underparts bright red; an irregular patch of yellow on the wings; middle tail-feathers red the entire length *A. macao*, p. 299.
 - b'. Head and underparts deep red; no yellow on the wings; middle tail-feathers tipped with blue *A. chloroptera*, p. 301.
- B. Smaller, wing less than 300 mm.
 - c. Lower aspect of quills and tail-feathers red *A. severa*, p. 303.
 - d. Lower aspect of quills and tail-feathers yellow.
 - c'. Lower abdomen red; under wing-coverts green *A. manilata*, p. 304.
 - d'. Lower abdomen green; under wing-coverts bright red *A. hahni*, p. 305.



Fig. 58.—To show the large and powerful bill and almost naked face.

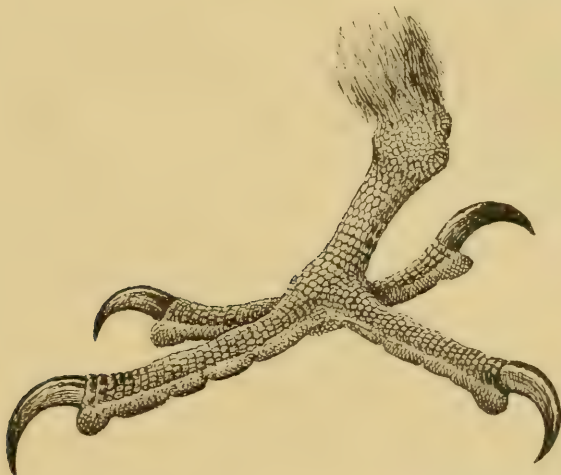


Fig. 59.—To illustrate the peculiar form of the foot.

189. *Ara ararauna*.

BLUE-AND-YELLOW MACAW.

- Psittacus ararauna* Linn. Syst. Nat. 10th ed. i. p. 96. 1758 (Brazil).
Macrocerus ararauna Cab. in Schomb. Reis. Guian. iii. p. 730, 1848;
 Brown, Canoe and Camp Life, p. 242, 1876 (Upper Essequibo River).
Ara ararauna Salvin, Ibis, 1886, p. 67; Quelch, Timehri (2) ii. p. 365,
 1888 (Tiger Island); Salvad. Cat. B. Brit. Mus. xx. p. 152, 1891
 (British Guiana); Lloyd, Timehri (2) ix. p. 275, 1895 (Savannahs).

xi. p. 7, 1897; Beebe, *Our Search for a Wilderness*, pp. 137, 338, 1910 (Barima, Aremu); Brabourne & Chubb, *B. S. Amer. i.* p. 79, no. 732, 1912.

“Cararawa” (*Lloyd*).

Adult female. Upper parts verditer-blue, including the head, back, wings, and tail; under surface orange-yellow; sides of face and chin naked with a few short feathers in front and under the eye, which joins up with a dark patch on the throat.

Total length 810 mm., culmen 67, wing 360, tail 505, tarsus 31, middle toe and claw 59.

The female from which the description is taken was collected at Mahaikony River.

Adult male. Similar in colour of plumage to that of the adult female, but rather larger. Wing 380 mm.

Breeding-season. Unknown in British Guiana.

Nest. “Frequently seen on the Savannahs, where it breeds, making its nest in the dead trunks of the Eta Palm” (*Lloyd*).

Eggs. “The Indians say that its eggs are speckled, but we were never able to prove the truth of this statement” (*Lloyd*).

Range in British Guiana. Mahaikony River (*McConnell collection*); Barima River, Aremu River (*Beebe*); Upper Essequibo River (*Brown*); Abary River (*Quelch*); Mahu and Takutu Rivers, Pacaraima Mountains (*Schomburgk*).

Extralimital Range. Brazil, Colombia, Eastern Peru, Bolivia, Paraguay.

Habits. Schomburgk states (*Reis. Guian. ii.* p. 79), that the pitter-patter sound caused by the falling of the shells of the fruit of the palms revealed to us the presence of a lot of Parrots eagerly satisfying their hunger on the ripe fruit—in fact, it sounded as if a cloud loaded with shot emptied its contents on the monster leaves of the Ravenala-plant.

Schomburgk (*op. cit.* iii. p. 730) says:—In mode of life and habits this gorgeous Ara is identical with *A. aracanga* = *A. macao*, p. 299; it is, however, more common than the last-named species. I found it very common on the borders of the rivers Mahu and Takutu, decoyed thither, no doubt, by the abundance of ripe fruits of the palms belonging to the genera *Astrocaryum*, *Bactris*, and *Maximiliana*. They must be very common on the Savanna region and the Pacaraima Mountains, as the natives there possessed numerous beautiful adornments made of feathers belonging to this species only, and I saw many kept in confinement. They are

very clannish, never associating with any other species. On the Takutu River we saw at sunrise hundreds of pairs sitting on the trees growing on the banks, preening themselves and caressing each other, emitting all the time a purring noise. The nidification is the same as that of *A. aracanga*. Its flesh is good. We made splendid soup of it during our journey up the Takutu River. The "Macusis" call it *Cararauma* and the "Warraus" *Apohuima*.

Mr. Barrington Brown (Canoe and Camp Life, p. 242) remarks:—"Blue-and-Yellow Macaws flew with discordant cries up or down the river, always approaching to have a look at us."

Mr. J. J. Quelch observed this species on the Abary River, and remarks (Timehri (2) ii. p. 365):—"The Blue-and-Yellow Macaw (*Ara ararauna*) is sometimes found here also, and a dried skin of one which had been shot a short time before was hung up inside the house."

Mr. C. A. Lloyd, writing on Guiana Parrots, remarks (Timehri (2) ix. p. 275):—"The Blue-and-Yellow Macaw, *A. ararauna*, known to the Indians as the 'Cararawa,' is frequently seen on the Savannahs, where it breeds, making its nest in the dead trunks of the Eta palm, *Mauritia flexuosa*. The Indians say that its eggs are speckled, but we were never able to prove the truth of this statement."

Mr. Beebe (Our Search for a Wilderness, p. 137) writes as follows:—"Blue-and-Yellow Macaws were common—always in multiples of two. We observed them a half-dozen times in different reaches of the river—four in the first group, then eight, two, six, four, and two."

He also remarks (*t. c.* p. 338):—"A pair of Blue-and-Yellow Macaws screamed. When heard in the distance, all harshness is eliminated from their voices, and an extremely human quality of sound is acquired, as of one person calling in a high tone to another."

190. *Ara macao*.

SCARLET MACAW.

Psittacus macao Linn. Syst. Nat. 10th ed. i. p. 96, 1758 (Pernambuco).

Macrocerus aracanga Cab. in Schomb. Reis. Guian. iii. p. 729, 1848;

Brown, Canoe and Camp Life, p. 192, 1876 (Burro Burro) (the author mentions that this was a tame bird).

Ara macao Salvin, Ibis, 1886, p. 67; Salvad. Cat. B. Brit. Mus.

xx. p. 154, 1891 (Demerara) : Lloyd, *Timehri* (2) ix. p. 275, 1895 (Savannahs) ; id. op. cit. xi. p. 7, 1897 ; Brabourne & Chubb, *B. S. Amer.* i. p. 79, no. 734, 1912.

“Warara” (*Lloyd*).

Adult male. Head, neck, upper back, lesser upper wing-coverts, four middle tail-feathers, and under surface bright red ; some of the median upper wing-coverts orange-yellow, tipped with blue and tinged with red ; greater coverts, bastard-wing, primary-coverts, quills, and outer tail-feathers blue ; lower back, rump, upper tail-coverts, and some of the long under tail-coverts cobalt-blue. “Upper mandible white, blackish at the tip and at the base of the edges ; under mandible black ; feet blackish ; iris yellowish white ; naked skin of the cheeks dusky flesh-yellow.”

Total length 980 mm., culmen 66, wing 402, tail 595, tarsus 34, middle toe and claw 61.

We do not know the exact locality in the Colony of the male from which the description is taken.

Adult female. Similar to the male. Wing 398 mm.

The number of specimens that we have been able to examine are so few, that we are unable to come to any satisfactory conclusions regarding the differences between the males, females, and the plumages of the young.

Breeding-season. Unknown in British Guiana.

Nest. “Nesting place in the hole of a tree” (*Schomburgk*).

Eggs. Two in number (*Schomburgk*).

Range in British Guiana. Demerara (*McConnell* collection) ; found throughout the Colony (*Schomburgk*) ; Ouruni (*Whitely*) ; Burro Burro (*Brown*).

Extralimital Range. East Brazil, Colombia, Ecuador, Peru, Bolivia.

According to Mr. C. A. Lloyd, this bird is common on the Savannas, but its nesting-place is unknown.

According to Schomburgk (*Reis. Guian.* ii. p. 197), Parrots and red Aras came now and then in large flocks to satisfy their hunger in the ripe maize-field. Their artfulness when going to plunder a field was astonishing. When they had found a field of ripe maize, sentinels were placed on the surrounding trees, their otherwise never-ceasing loud calls, or cries, of their rough voices are silenced into a purring undertone, only heard here and there. If danger approaches, the sentinels warn the flock that is feeding with a subdued note, which is answered by a not very loud

screeching sound from the field. If the danger becomes serious, the sentinels leave the trees uttering their loud cries and immediately the whole flock rises from the field and makes swift flight to the nearest wood for shelter. These birds are much sought after by the natives, who make ornaments of their feathers.

Schomburgk also writes (*op. cit.* iii. p. 729):—This beautiful Ara is found throughout the interior of British Guiana and appears periodically on the coast, decoyed thither by the ripe fig-trees, this being the only season when it is found near the coast. They frequent, as a rule, the dense woods of high altitudes and appear to avoid the settlements and cultivated grounds. They live in pairs or small flocks, and he did not remember ever having seen solitary individuals. They nest in hollow trees, or holes in branches—if the latter are too small they enlarge them with their strong bills; the same site is used for years. When brooding the long tail projects from the nesting-hole, which enables the observer to find the nest more easily. It lays two eggs. The flesh of the young is good, but that of the adult is somewhat tough, though when boiled it makes a piquant soup, which has an onion-like flavour. This bird is much hunted by the natives, who use their feathers to decorate themselves and also their arrows. The “Macusis” call it *Cuijari* and the “Warraus” *Apahaera*.

191. *Ara chloroptera*.

RED-AND-YELLOW MACAW.

Ara chloroptera Gray, List Psitt. Brit. Mus. p. 26, 1859 (Guiana); Salvin, Ibis, 1886, p. 66 (Bartica Grove, Camacusa); Quelch, Timehri (2) iv. p. 326, 1890 (Berbice River); Salvad. Cat. B. Brit. Mus. xx. p. 156, 1891; Lloyd, Timehri (2) ix. p. 274, 1895 (habits); id. *op. cit.* xi. p. 7, 1897 (nesting-habits); Brabourne & Chubb, B. S. Amer. i. p. 79, no. 735, 1912.

Macrocerus macao (nec Linn.), Cab. in Schomb. Reis. Guian. iii. p. 730, 1848.

“Couarries,” “Red-and-Blue Macaw” (*C. A. Lloyd*).

Adult female. Head, neck, mantle, basal portion of tail, lesser upper wing-coverts, and entire under surface deep red; median and greater upper wing-coverts, bastard-wing, primary-coverts, and quills blue like the tips of the tail-feathers; lower back and upper tail-coverts also blue, but paler.

Total length 920 mm., culmen 81, wing 410, tail 530, tarsus 32, middle toe and claw 65.

We do not know the exact locality, in British Guiana, of the female described.

Adult male. Similar in the colour of the plumage to that of the female, but slightly smaller in size. Wing 395 mm.

Breeding-season. Unknown in British Guiana.

Nest. "Nests in the high Mora trees" (C. A. Lloyd).

Eggs. Undescribed from British Guiana.

Range in British Guiana. Bartica, Bonasika River (McConnell collection); Canuku and Pacaraima Mountains (Schomburgk); Kamakusa (Whitely).

Extralimital Range. Northern Brazil, Ecuador, Bolivia.

Habits. This species, according to Schomburgk (Reis. Guian. iii. p. 730), was found by him more numerously on the Canuku and Pacaraima Mountains. Its mode of life and habits are the same as those of the two preceding species—*Macrocerus aracanga* (= *Ara macao*, p. 299) and *M. araua* (= *A. urarauna*, p. 297).

Mr. J. J. Quelch (Timehri (2) iv. p. 326) observed this species on the Upper Berbice River, and remarks:—"The great green-winged Blue-and-Red Macaw (*Ara chloroptera*) was the common form seen, and three specimens were shot, though from their high flight they seldom gave a chance."

Mr. C. A. Lloyd (Timehri (2) ix. p. 274), writing on Guiana Parrots, remarks:—"This species is common all over the Colony but is more abundant in the remote parts of the interior, where it nests in high mora trees. It is the favourite bird of the Macoushi Indians—no Macoushi village is complete without one or two tame 'Couarries.' The nests of the Red-and-Blue Macaw are placed in such inaccessible situations that even the Indian's ingenuity is baffled in trying to reach them; he is therefore compelled to shoot the adult birds with his blow-pipe. As soon as a bird is struck and falls he immediately administers to it a dose of cane juice and salt, which, acting as an antidote to the deadly Wourali, soon restores 'Couarrie' to his senses, when he is taken to the Indian's hut and in a few days is as tame and accustomed to his surroundings as if he had been bred and born there."

He also writes (*op. cit.* (2) xi. p. 7):—"The Red-and-Blue Macaw, *A. chloroptera*, breeds on the tops of the tallest trees.

"This bird, Mr. Barshall informs me, often makes its nest at a very moderate height from the ground, so that it can easily be reached by climbing, but in the Savannah it always selects the highest trees for the purpose."

192. *Ara severa*.

BRAZILIAN GREEN MACAW.

Psittacus severus Linn. Syst. Nat. 10th ed. i. p. 97, 1758 (Colombia).

Conurus severus Cab. in Schomb. Reis. Guian. iii. p. 729, 1848.

Ara severa Salvin, Ibis, 1886, p. 66; Salvad. Cat. B. Brit. Mus. xx. p. 161, 1891; Brabourne & Chubb, B. S. Amer. i. p. 80, no. 739, 1912.

Adult. General colour above and below grass-green; crown of head and nape inclining to blue; bastard-wing, primary-coverts, and quills blue edged with brown on the inner webs; tail-feathers blue at the tips, green on the basal portion, brown on the inner webs towards the base and also on the central portion of the middle tail-feathers; bend of wing and under wing-coverts scarlet with a few green feathers intermixed, the greater series olive-green; quill-lining and lower aspect of tail dark rose-pink; base of forehead brown.

Total length 445 mm., culmen 37, wing 231, tail 227, tarsus 21.

This species is not represented in the McConnell collection, and the bird from which the description is taken is in the British Museum and was collected at Bogota.

A male bird in the same collection is similar to the one described, and has a wing-measurement of 245 mm., and was collected by Mr. J. Hauxwell at Pebas, East Peru, on the 4th of August, 1866—Salvin-Godman collection.

The only record of the occurrence of this species in British Guiana is that of Schomburgk (Reis. Guian. iii. p. 729).

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Unknown.

Extralimital Range. Brazil, Venezuela, Colombia, Ecuador, Peru, Bolivia.

Habits. Schomburgk (Reis. Guiana, iii. p. 729) mentions this bird as one of the rarer species in British Guiana. During the whole of his stay in the Colony he only met with it a few times. It roamed about in small flocks. Its habits and mode of life are similar to those of the other *Araras*. When it is feeding one hears a "purring" noise. It generally sits in pairs, caressing each other.

193. *Ara manilata*.

RED-BELLIED MACAW.

Psittacus manilatus Bodd. Tabl. Pl. Enl. p. 52, 1783 (Cayenne).

Conurus macaruaana (Gmel.), Cab. in Schomb. Reis. Guian. iii. p. 729, 1848.

Ara macaruaana Salvin. Ibis, 1886, p. 67 (Roraima, 3500 ft.); Quelch, Timehri (2) ii. p. 373, 1888 (Abary River).

Ara macaruaana Salvad. Cat. B. Brit. Mus. xx. p. 165, 1891 (Roraima).

Ara manilata Brabourne & Chubb, B. S. Amer. i. p. 80, no. 743, 1912.

"Small Macaw," "Æta Parrot" (Quelch).

Adult male. General colour of the upper parts green inclining to blue on the head, sides of face, and outer portion of the flight-quills, with pale edges to the feathers of the upper back, scapulars, and upper wing-coverts; under surface more olive-green with a patch of deep red on the abdomen.

Total length 395 mm., culmen 28, wing 238, tail 203, tarsus 20, middle toe and claw 43.

The male from which the description is taken was collected at Bartica.

Adult female. Similar to the adult male. Wing 243 mm.

The description of the female is taken from an example collected at Lama in September 1896.

Breeding-season. Unrecorded in British Guiana.

Nest. "It nests in the holes of trees made by Woodpeckers" (Schomburgk).

Eggs. "It is said to lay two eggs" (Schomburgk).

Range in British Guiana. Takutu River, Supenaam River, Bartica, Bonasika River, Madaweene Creek, Lama (McConnell collection); Mount Roraima (Whitely); Abary River (Quelch).

Extralimital Range. North Brazil, Peru, Ecuador.

Habits. According to Schomburgk (Reis. Guian. iii. p. 729) this bird is distributed throughout the whole of British Guiana. It appears to be very fond of the ita palms (*Mauritia flexuosa*), as when passing a clump of these palms I always found a flock of these birds feeding there. Its voice is clear and high-pitched. If disturbed, it leaves the palms uttering its loud cries, and flies for some time round and round the particular clump of palms from whence it was disturbed. It nests in holes made by Woodpeckers and is said to lay two eggs. The "Macusis" and "Aukunas" call it *Marakang*.

Mr. J. J. Quelch observed this species on the Abary River, and remarks (Timehri (2) ii. p. 373):—"The Small Macaw (*Ara macrurana*) or Æta Parrot crossed the creek morning and evening in almost continuous flights, but high up and generally out of range."

194. *Ara hahni*.

HAHN'S MACAW.

Psittacara hahni Souancé, Rev. et Mag. de Zool. 1856, p. 58 (Colombia).
Macrocercus nobilis (nec Linn.), Cab. in Schomb. Reis. Guian. iii. p. 729, 1848.

Ara hahni Salvin. Ibis, 1886, p. 67 (Roraima, 3500 ft.): Quelch, Timehri (2) ii. p. 373, 1888 (Abary River); Salvad. Cat. B. Brit. Mus. xx. p. 168, 1891; Lloyd, Timehri (2) ix. p. 275, 1895; id. op. cit. xi. p. 8, 1897 (nesting-habits).

"The Small Macaw" (Quelch); "The Little Green Æta Parrot" (C. A. Lloyd).

Adult male. General colour above and below grass-green, inclining to blue on the fore part of the head; under wing-coverts, edge of wing, and shoulder-patch bright scarlet; quill-lining and lower aspect of tail old-gold yellow.

Total length 296 mm., culmen 27, wing 170, tail 144, tarsus 17.

The male from which the description is taken was collected on the Bonasika River.

Adult female. Similar to the adult male. Wing 173 mm.

The description of the female is taken from an example collected at Lama in September 1896.

A young bird, from the Upper Takutu Mountains, differs from the adult in being smaller and in the absence of the scarlet shoulder-patch.

Breeding-season. "December and January" (C. A. Lloyd).

Nest. "It nests in dried trees, especially such as have been destroyed by fire, taking advantage of old Woodpecker-holes, which it often enlarges to suit its requirements" (C. A. Lloyd).

Eggs. "It is supposed to lay three or four eggs in a hollow tree" (Schomburgk).

Range in British Guiana. Upper Takutu Mountains, Itaribisi River, Bonasika River, Abary River (*McCormell collection*); Abary River (Quelch); Mount Roraima, 3500 ft. (*Whately*); Savannas near Pirara (Schomburgk).

Extralimital Range. North Brazil, Venezuela, Colombia.

Habits. Schomburgk states (Reis. Guian. iii. p. 729) that he found this species for the first time on the Savannas near Pirara. Morning and evening large flocks, uttering their far-sounding cry, flew to and fro to the far-off woods and oasis. It is supposed to lay three or four eggs in hollow trees. He rarely found it in captivity. The "Macusis" and the "Arekunas" call this bird *Keih-keih*.

Mr. J. J. Quelch observed this species on the Abary River, and remarks (Timehri (2) ii. p. 373) :—"The Small Macaw (*Ara hahnii*) crossed the creek morning and evening in almost continuous flights, but high up and generally out of range."

Mr. C. A. Lloyd, writing on Guiana Parrots, remarks (Timehri (2) ix. p. 8), :—"The Little Green 'Eta Parrot' (*Ara hahnii*) is the smallest of the Macaws. It is widely distributed throughout the Colony, and together with the 'Screecher' Parrot is in some places the most obtrusive form of bird-life. It nests in dried trees, especially such as have been destroyed by fire, taking advantage of old Woodpecker-holes, which it often enlarges to suit its requirements. The generic name *Ara*, given to the Macaws by Kuhl, is said to be derived from some Indian name for these birds, and is really a very good imitation of their usual note." He also writes (*op. cit.* (2) xi. p. 8) : "Decaying Eta palms are the nesting-places of *Ara hahnii*. The Eta Parrot (*Ara hahnii*) lays in December and January."

Genus **ARATINGA** Spix.

Aratinga Spix, Av. Bras. i. p. 29, 1824. Type *A. guarouba* (Gmel.).

In this genus the orbital ring is complete, the lores are feathered, and the fourth primary is attenuated. The tail is graduated.

Key to the Species.

- | | |
|---|------------------------------------|
| A. Throat orange like the abdomen; upper parts yellow; tail-feathers tipped with blue | <i>A. solstitialis</i> , p. 307. |
| B. Throat green like the abdomen; upper parts green, including the entire tail... | [p. 308. <i>A. leucophthalma</i> , |
| C. Throat olive-brown in contrast with the abdomen, which is yellowish green. | |
| <i>a.</i> Fore part of head bluish green | <i>A. æruginosa</i> , p. 309. |
| <i>b.</i> Fore part of head orange-yellow | <i>A. aurea</i> , p. 310. |

195. *Aratinga solstitialis*.

YELLOW PARROT.

Psittacus solstitialis Linn. Syst. Nat. 12th ed. i. p. 141. 1766 (Cayenne).
Conurus solstitialis Cab. in Schomb. Reis. Guian. iii. p. 728. 1848;
 Brown, Canoe and Camp Life, p. 312, 1876 (Pacaraima Mts.);
 Salvin, Ibis, 1886, p. 67; W. L. Seater. Ibis, 1887, p. 317 (Pomeroon River);
 Salvad. Cat. B. Brit. Mus. xx. p. 175, 1891 (Quonga);
 Lloyd, Timehri (2) ix. p. 276, 1895 (Savannah country).
Aratinga solstitialis Brabourne & Chubb, B. S. Amer. i. p. 81, no. 750, 1912.

“Kissi-Kissi” (*Brown*); “The Kissie-Kissie” (*C. A. Lloyd*).

Adult male. General colour above and below yellow, suffused with red, more intensely on the sides of the face and abdomen; outer webs of the greater upper wing-coverts and quills green; secondaries only slightly edged with green on the outer webs; bastard-wing, primary-coverts, and quills blackish, mostly blue towards the tips, with more or less yellow on the feathers; tail blue on the apical portion with more or less green towards the base, the middle feathers golden green.

Total length 285 mm., culmen 22, wing 160, tail 148, tarsus 17.

The male described is in the British Museum, and was collected by Whitely at Quonga, British Guiana, on November 15th, 1887—Salvin-Godman collection.

Adult female. Similar to the adult male. Wing 155 mm.

Breeding-season. Unknown in British Guiana.

Nest. In holes in trees (*Schomburgk*).

Eggs. Three or four in number (*Schomburgk*).

Range in British Guiana. Mahu River, Pacaraima Mountains, Mount Roraima (*Schomburgk*); Pomeroon River (*W. L. Seater*); Quonga (*Whitely*); Pacaraima Mountains (*Brown*).

Extralimital Range. North Brazil.

Habits. Of this bird Schomburgk states (Reis. Guian. iii. p. 728) that he first met with it in the districts of the Mahu River, though he felt certain that it was only there because the fruit of the malpighia trees was ripe. He found them more abundant near the Pacaraima Mountains and in the vicinity of Roraima Mountain. It is the pet-bird of the natives; he often noticed twenty to thirty specimens caged in one settlement, and they

appeared to live quite happily together. In the wild state it flies about in large flocks, constantly uttering its loud and unpleasant call, and sitting on solitary trees or in the oasis. It takes two to three years to attain its beautiful golden-yellow plumage. According to the natives, it lays three or four eggs and nests in the holes of trees. The "Macusis" and "Aukunas" call this bird *Kessi-Kessi* and the "Warraus" *Kuyaeseh*.

Mr. Barrington Brown (Canoe and Camp Life, p. 312) writes:—"The beautiful little orange, red, and green Parrakeets, called 'Kissi-Kissi,' are not seen in this part, but frequent the Pacaraima Mountains."

Mr. C. A. Lloyd, writing on Guiana Parrots, remarks (Timehri (2) ix. p. 276):—"The 'Kissie-Kissie' (*Conurus solstitialis*) deserves notice as being the most gaudy of all the British Guiana Conures. We have only observed it in the Savannah country, flying high overhead in small flocks. The Indians frequently bring this pretty little species to town for sale, but it does not appear to thrive in captivity."

196. *Aratinga leucophthalma*.

WHITE-EYED PARROT.

Psittacus leucophthalmus P. L. S. Müll. Syst. Nat. Suppl. p. 75, 1776 (Guiana).

Conurus guianensis Cab. in Schomb. Reis. Guian. iii. p. 729, 1848.

Conurus pavua Salvin, Ibis, 1886, p. 67.

Conurus leucophthalmus Salvad. Cat. B. Brit. Mus. xx. p. 187, 1891 (British Guiana).

Aratinga leucophthalmus Brabourne & Chubb, B. S. Amer. i. p. 92, no. 760, 1912.

Adult male. General colour above and below grass-green, rather paler on the under surface, sometimes a few scarlet feathers intermixed on the sides of the face; carpal patch, edge of wing, and outer under wing-coverts bright scarlet; greater series of under wing-coverts yellow; quill-lining and under surface of tail old-gold yellow. "Bill yellowish flesh-colour; naked skin round the eyes ashy flesh-colour; feet dusky."

Total length 301 mm., culmen 25, wing 159, tail 133, tarsus 16.

This species is not represented in the McConnell collection, and the description of the male is taken from an example in the British Museum collected in British Guiana—Slater collection.

Adult female. Differs from the adult male in the absence of the

scarlet on the edge and bend of the wing. Wing-measurement 172 mm. The female from which the description is taken is also in the National Collection.

Breeding-season. Unknown in British Guiana.

Nest. The same as other Conures (*Schomburgk*).

Eggs. Three or four in number (*Schomburgk*).

Range in British Guiana. Oasis of the Savannas (*Schomburgk*).

Extralimital Range. Trinidad, Colombia, Ecuador, Eastern Peru, Bolivia.

Habits. Schomburgk states (Reis. Guian. iii. p. 729) that he first met with this beautiful bird in the oasis of the Savannas. Its mode of life and habits are the same as those of the other Conures. It also lays three or four eggs.

197. *Aratinga æruginosa*.

BROWN-THROATED PARROT.

Psittacus æruginosus Linn. Syst. Nat. 10th ed. i. p. 98, 1758 (Cayenne).

Conurus pertinax (nec Linn.), Cab. in Schomb. Reis. Guian. iii. p. 728, 1848; Salvin, Ibis, 1886, p. 68 (Roraima, 3500 ft.).

Conurus æruginosus Salvad. Cat. B. Brit. Mus. xx. p. 195, 1891 (Quonga).

Aratinga æruginosus Brabourne & Chubb, B. S. Amer. i. p. 82, no. 762, 1912.

Adult male. General colour of the upper surface green; flight-quills blue towards the tips, with the margins of the inner webs brown; a tinge of blue on the fore part of the head; base of forehead, a line over the eye, and sides of face orange; throat and breast yellowish olive-green; remainder of the under surface yellowish green; lower abdomen orange.

Total length 238 mm., culmen 20, wing 136, tail 105, tarsus 14, middle toe and claw 23.

The male from which the description is taken was collected at Perth on the Essequibo River.

Adult female. Similar to the adult male, but differs in the absence of the orange patch on the sides of the face and the general colour of the plumage not so bright. Wing 139 mm.

The description of the female is taken from an example collected on the Abary River.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Mount Roraima, Upper Takutu Mountains, Bonasika River, Abary River (*McConnell collection*); Savannas (*Schomburgk*); Quonga (*Whitely*).

Extralimital Range. North Brazil, Venezuela, Colombia.

Habits. Schomburgk states (*Reis. Guian.* iii. p. 728) that small flocks of this species are found on the Savannas only, where they fly about uttering their loud and clear calls, settling now and then on solitary trees or in the oasis. It lays more than two eggs, which is a peculiarity apparently common to the species of this genus. The "Macusis" call it *Tumih-Tumih*.

198. *Aratinga aurea*.

GOLDEN-CROWNED PARROT.

Psittacus aureus Gmel. Syst. Nat. i. p. 329, 1788 (Brazil).

Conurus canicularis (nec Linn.), Cab. in Schomb. Reis. Guian. iii. p. 728, 1848.

Conurus aureus Salvin, Ibis, 1886, p. 68; Salvad. Cat. B. Brit. Mus. xx. p. 199, 1891.

Aratinga aureus Brabourne & Chubb, B. S. Amer. i. p. 82, no. 766, 1912.

Adult male. General colour above green, including the hind-neck, entire back, upper wing-coverts, scapulars, and tail; a line from the lores over the eye and hinder part of the head bluish; tips of primary-coverts, tips of primary-quills, and outer webs of secondaries tinged with blue; forehead and a ring encircling the eye orange-yellow; fore part of cheeks, chin, and throat olive-brown; abdomen, under tail-coverts, and under wing-coverts yellowish green. "Naked skin round the eye grey; bill and feet blackish; iris yellow-orange."

Total length 265 mm., culmen 17, wing 150, tail 154, tarsus 10.

Adult female. Similar to the adult male, but apparently rather smaller. Wing 142 mm.

This species is not represented in the *McConnell collection*, and the specimens described are in the British Museum. The male was collected at Bahia by Dr. Wucherer—*Salvin-Godman collection*, and the female at Matto Grosso by H. H. Smith.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Unrecorded.

Extralimital Range. Brazil, Bolivia, Paraguay.

Habits. According to Schomburgk (Reis. Guian. iii. p. 728) the mode of life and habits of this bird are the same as those of *Conurus tiriacula* (= *Brotogeris tirica*, p. 317).

The "Macusis" call it *Gerrækui* and the "Warraus" *Tyoyatsuya*.

Genus PYRRHURA Bonap.

Pyrrhura Bonaparte, Naumannia, 1856, tab. F. p. 382. Type *P. molinæ* Mass.

This genus is distinguished by having the cere naked, the nostrils exposed, the orbital ring complete, the tail graduated; the feathers on the sides of the face, fore-neck, and breast have pale edges which give a scaly appearance.

Key to the Species.

- A. Lower back and fore part of cheeks crimson;
under wing-coverts green *P. picta*, p. 311.
- B. Entire back and cheeks green; under wing-
coverts orange-red *P. egregia*, p. 313.

199. *Pyrrhura picta*.

BLUE-WINGED PARROT.

Psittacus pictus P. L. S. Müll. Syst. Nat. Suppl. p. 75, 1776 (Cayenne).

Conurus versicolor Cab. in Schomb. Reis. Guian. iii. p. 728, 1848.

Conurus cyanopterus Salvin, Ibis, 1886, p. 67.

Pyrrhura picta Salvad. Cat. B. Brit. Mus. xx. p. 217, 1891 (Quonga, Upper Takutu River); Lloyd, Timehri (2) ix. p. 274, 1895 (Essequebo River); Brabourne & Chubb, B. S. Amer. i. p. 84, no. 781, 1912.

Adult male. Upper back, scapulars, upper wing-coverts, a portion of the upper tail-coverts, and margins of the tail-feathers green like the sides of the body, under wing-coverts, and under tail-coverts; fore part of head and outer aspect of quills blue; hinder crown and occiput dark brown; carpal joint bright red; back, a portion of the upper tail-coverts, and tail crimson, like the feathers round the eye and fore part of the cheeks; a crimson patch on the middle of the abdomen; ear-coverts dull white or isabelline; throat and breast brown, becoming green towards the abdomen, the feathers edged with isabelline which imparts a scalloped appearance.

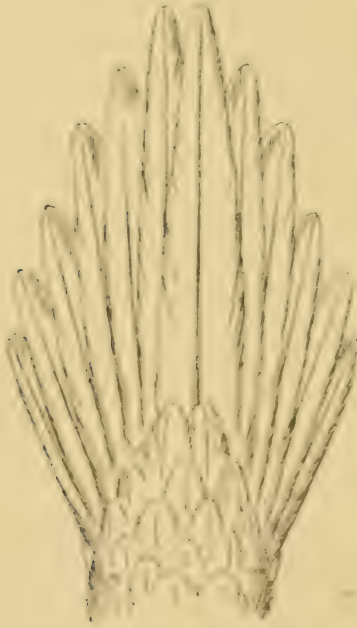
Total length 232 mm., culmen 17, wing 122, tail 115, tarsus 15.

The male from which the description is taken was collected in the Colony, but we do not know the exact locality.



Pyrrhura picta.

Fig. 60.—To show the squamated appearance on the sides of the face.



Pyrrhura picta.

Fig. 61.—To illustrate the graduated tail.

Adult female. Similar to the adult male in the colour of the plumage, but, as regards the wing-measurements, we have measured several of each sex and find that the male is slightly the largest. Wing 120 mm.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Essequibo River (McConnell collection); Quonga, Takutu River (Whitely); Canuku Mountains (Schomburgk).

Extralimital Range. Surinam (Penard), Cayenne.

Habits. Schomburgk writes (Reis. Guian. iii. p. 728) that this beautiful gaily-coloured species is one of the rarer Parrots in British Guiana. He only met with it in the Canuku Mountains. It does not appear to leave the woods of the high altitudes, where it roams about in small companies. Its quick lightning flight is accompanied by its loud cries, but when feeding it is quite silent. He never saw any caged specimens in the possession of the natives, but perhaps it is not easily tamed. The nidification is unknown. The "Macusis" call it *Tumih-Tumih* and the "Warraus" *Wacarlaluccu*.

Mr. C. A. Lloyd, writing on some Guiana Parrots, remarks (Timehri (2) ix. p. 274):—"On the Essequibo River we have met with the only examples of *Pyrrhura picta* we have seen, but it is by no means a rare bird, being found in other parts of the Colony as well."

200. *Pyrrhura egregia*.

DEMERARA PARROT.

Conurus egregius Schater. Ibis, 1881, p. 130, pl. iv. (Demerara); Salvin, Ibis, 1886, p. 68 (Merumé Mts., Roraima, 3500 to 4000 ft.).

Pyrrhura egregia Salvad. Cat. B. Brit. Mus. xx. p. 221, 1891; Brabourne & Chubb, B. S. Amer. i. p. 84, no. 784, 1912.

Adult. General colour above green, suffused with brown on the fore part of the head; outer aspect of primary-coverts and quills blue; tail brown; carpal joint, under wing-coverts, and axillaries red, becoming yellow on the bastard-wing; fore-neck brown with pale edges to the feathers; cheeks, ear-coverts, abdomen, sides of body, and under tail-coverts green with dull crimson bases to the feathers of the ear-coverts and abdomen.

Total length 232 mm., culmen 16, wing 126, tail 115, tarsus 15, middle toe and claw 20.

The description is taken from an example collected by Mr. McConnell at Mount Roraima in October 1898.

Breeding-season. Unknown.

Nest. Unrecorded.

Eggs. Undescribed.

Range. Confined to British Guiana: Mount Roraima (McConnell).

collection): Mount Roraima (3500 to 4000 ft., January, August, December), Merumé Mountains (June), Kamarang River, Annai (Whitely).

Habits. Unrecorded.

This species is restricted to British Guiana, where the late Henry Whitely collected the majority of known specimens.

Genus **BOLBORHYNCHUS** Bonap.

Bolborhynchus Bonaparte. Compt. Rend. Paris, xliv. p. 596. 1857.

Type *B. aymara* (d'Orb.).

This genus is characterized by having the orbital ring incomplete, the bill swollen on the sides, the oil-gland tufted, a furcula present, and the nostrils exposed and open in the cere and much swollen all round.

201. *Bolborhynchus panychlorus*.

RORAIMA PARRAKEET.

Brotagerys panychlorus Salvin & Goldman. Ibis, 1883, p. 211, pl. ix. fig. 1 (Mt. Roraima); Salvin, Ibis, 1886, p. 68 (Roraima, 3500 ft.).

Bolborhynchus panychlorus Salvad. Cat. B. Brit. Mus. xx. p. 238, 1891: Brabourne & Chubb, B. S. Amer. i. p. 86, no. 804, 1912.

Adult male. General colour above and below green, somewhat paler on the latter. "Bill dusky; feet pale brown."

Total length 142 mm., culmen 13, wing 95, tail 38, tarsus 12, middle toe and claw 17.

The male described was collected by Mr. McConnell at Mount Roraima in October 1898.

We have examined the series of this species in the British Museum, which consists of four males and two females. Both sexes are alike in plumage, and as regards the wing-measurements the males measure 91-96 mm. and the females 91 and 93 mm. They were all collected at Mount Roraima by Whitely during the months of November 1881, January 1882 and 1884.

Breeding-season. Unknown.

Nest. Unrecorded.

Eggs. Undescribed.

Range. Confined to British Guiana: Mount Roraima, October 1898 (*McConnell collection*); Mount Roraima, January and November (*H. Whitely*).

Habits. Unrecorded.

Genus **PSITTACULA** Kuhl.

Psittacula Kuhl, Consp. Psitt. p. 8, 1820. Type *P. passerina* (Linn.).

This genus is distinguished by the absence of a furcula, the bill swollen on the sides, the culmen rounded, the orbital ring incomplete, and the short tail.

202. *Psittacula modesta*.

SCHOMBURGK'S PARRAKEET.

Psittacula modesta Cab. in Schomb. Reis. Guian. iii. p. 727, 1848 (British Guiana); Salvad. Cat. B. Brit. Mus. xx. p. 245 note, 1891; Brabourne & Chubb, B. S. Amer. i. p. 86, no. 810, 1912.

"*Psittacus modesta*. Cab., nov. sp.—A single specimen, labelled ♂, without any blue, differs from the ♀ of *passerina* in being larger and especially in its broader bill. Forehead and fore part of crown is, as is also the whole underparts, yellowish green, the green of the upper parts is less brilliant and darker (about the same as in *P. suiipara*), flight-feathers black. Rump, under wing-coverts, and outer edges of primaries grass-green, inner edge of flight-feathers washed with dull blue. Upper mandible dark brown, lower mandible pale. Total length 5'' 8''' (= 131 mm.), wing 3½''' (= 77), tail 1'' 8''' (= 39), middle toe without claw 6¾''' (= 13). I (Schomb.) also doubt this species, and my doubts are as above (*gregarius*) that I always obtained this species when shooting into a flock of *passerina*."

As the type specimen of this species is not available at the present time for comparison, we have copied the original description.

203. *Psittacula passerina*.

BLUE-WINGED PARRAKEET.

Psittacus passerinus Linn. Syst. Nat. 10th ed. i. p. 103, 1758 (Guiana).

Psittacula gregaria Cab. in Schomb. Reis. Guian. iii. p. 727, 1848.

Psittacula guianensis Salvad. Cat. B. Brit. Mus. xx. p. 251, 1891.

Psittacula sp., Lloyd, Timehri (2) xi. p. 7, 1897.

Psittacula passerina Brabourne & Chubb, B. S. Amer. i. p. 87, no. 816, 1912.

Adult male. General colour above and below green; forehead, lower back, and rump emerald-green; primary-coverts above and under wing-coverts ultramarine-blue.

Total length 114 mm., culmen 12, wing 82, tail 37, tarsus 12.

The male from which the description is taken was collected at the Upper Takutu Mountains.

Adult female. Differs from the adult male in the absence of the blue on the rump, greater upper wing-coverts, outer webs of primary-quills, and under wing-coverts, these parts being replaced by emerald-green. Wing 83 mm.

Breeding "all the year round in confinement" (*C. A. Lloyd*).

Nest. Undescribed in British Guiana.

Eggs. "Laying as many as four eggs at a time—in confinement" (*C. A. Lloyd*).

Range in British Guiana. Upper Takutu Mountains (*McConnell collection*).

Extratropical Range. Surinam (*Penard*) and Cayenne.

There are two other individuals in the *McConnell collection*, which were collected at the Mountains of the Moon, but we consider that locality to be outside the bounds of the Colony.

Habits. Schomburgk was evidently much interested in the manners of this little Parrot and the affection shown by the male and female towards each other (*cf.* *Reis. Guian.* i. p. 74), as he states that their life is a perfection of married life—if one calls, then the other does the same; if papa eats, mamma follows suit; if papa has a bath, mamma indulges as well; if either is ill, the other is most attentive in administering food, etc. Schomburgk also mentions (*Reis. Guian.* iii. p. 726) that this little Parrot is found in large flocks. It appears to prefer the vicinity of the coast and settlements rather than the interior, where it is less common. When flying it emits its short and musical note. The tree in which it prefers to perch is the tamarisk, the flowers and shoots of which it greedily devours. It also hunts the undergrowth for various berries and fruits. He did not see many tame birds of this species, and was told that they did not live long in captivity. Schomburgk did not know anything about its nidification.

Mr. C. A. Lloyd, writing on the nesting of some Guiana birds, remarks (*Timehri* (2) xi. p. 7):—"We know nothing concerning the habits of the little Love-birds, *Psittacula* sp., in their wild state, but in captivity they are prolific, breeding all the year round, and laying as many as four eggs at a time."

Genus **BROTOGERIS** Vig.

Brotogeris Vigors, Zool. Journ. ii. p. 400. 1825. Type *B. pyrrhopterus* (Lath.).

In this genus the bill is somewhat compressed, the cere is naked, there is no tufted oil-gland, and the orbital ring is incomplete.

Key to the Species.

- A. Larger, tail more than 80 mm.; primary-coverts blackish edged with green on the outer webs, uniform in colour with the rest of the wing *B. tirica*, p. 317.
 B. Smaller, tail less than 80 mm.; primary-coverts orange-yellow in strong contrast to the rest of the wing, which is green ... *B. chrysopterus*, p. 318.

204. *Brotogeris tirica*.

ALL-GREEN PARRAKEET.

Psittacus tirica Gmel. Syst. Nat. i. p. 351, 1788 (Brazil).

Conurus tiriacula Cab. in Schomb. Reis. Guian. iii. p. 727, 1848.

Brotogeris tiriacula Salvin, Ibis, 1886, p. 68.

Brotogeris tirica Salvad. Cat. B. Brit. Mus. xx. p. 254, 1891.

Brotogeris tirica Brabourne & Chubb, B. S. Amer. i. p. 87, no. 820, 1912.

Adult male. Upper wing-coverts, scapulars, back, rump, and upper tail-coverts, and tail dark grass-green with a tinge of bronze-green on the lesser upper wing-coverts; crown of head and nape pale grass-green; sides of face, throat, breast, abdomen, and under tail-coverts apple-green; under wing-coverts yellowish green; primary-coverts and primary-quills dark blue edged on the outer webs of the latter with green, the inner webs of which are for the greater part brown; lower aspect of quills and tail-feathers dull bluish green. "Bill reddish flesh-colour; cere whitish; feet brownish flesh-colour; iris brown-grey."

Total length 225 mm., culmen 18, wing 122, tail 119, tarsus 13.

Adult female. Like the adult male. Wing 123 mm.

This species is not represented in the McConnell collection, and the descriptions of the male and female are taken from specimens in the British Museum, collected by Joyner at Rio Janeiro—Alexander Fry Collection.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Habits. This is still the only record of the occurrence of this species in British Guiana, viz., Schomb. Reis. Guian. iii. p. 727. It is, according to Schomburgk, gregarious and found in the woods. Like all Parrakeets it distinguishes itself by its loud piercing voice. The "Macusis" call it *Kehrih-Kehrih*.

205. *Brotogeris chrysopterus*.

GOLDEN-WINGED PARRAKEET.

Psittacus chrysopterus Linn. Syst. Nat. 12th ed. i. p. 149, 1766 (Guiana).

Conurus tuiparus Cab. in Schomb. Reis. Guian. iii. p. 727, 1848.

Brotogeris chrysoptera Salvin, Ibis, 1886, p. 68 (Bartica Grove, Camacusa).

Brotogeris chrysopterus Salvad. Cat. B. Brit. Mus. xx. p. 263, 1891.

?*Brotogeris* Lloyd, Timehri (2) ix. p. 273, 1895.

Brotogeris chrysopterus Brabourne & Chubb, B. S. Amer. i. p. 88, no. 829, 1912.

Adult male. General colour above and below green, somewhat paler on the latter; primary-coverts orange; primary-quills blue with green on the edge of the outer webs and at the tips, margin of inner webs brown; base of forehead and chin dark brown.

Total length 174 mm., culmen 19, wing 109, tail 63, tarsus 11.

The male from which the description is taken was collected on the Ituribisi River.

Adult female. Similar to the adult male. Wing 106 mm.

The description of the female is taken from a specimen in the British Museum, collected by Whitely at Bartica on October 3rd, 1879—Salvin-Godman collection.

Breeding-season. Unknown in British Guiana.

Nest. "It nests in the holes in trees" (*Schomburgk*). "They generally lay their eggs in the deserted nests of wood-ants (termites)" (*C. A. Lloyd*).

Eggs. "Two to four eggs form the clutch" (*Schomburgk*).

Range. Confined to British Guiana: Ituribisi River (*McConnell collection*); Bartica, Kamakusa (*Whitely*).

Habits. Schomburgk states (Reis. Guian. iii. p. 727) that this somewhat large species is found throughout British Guiana. It flies about near the coast in large flocks, and is very fond of settling on the flowering erythrin trees growing in the coffee-plantations, and devouring the flowers. Its nest is in the holes of trees, and two to four eggs form the clutch.

We quote the following note, which may or may not apply to this species, from Mr. C. A. Lloyd (Timchri (2) ix. p. 273):—"Several species of *Brotojeris* were also reported from the Colony, but they are small green birds, hardly distinguishable from each other except in size, and not very interesting from an æsthetic point of view. They generally lay their eggs in the deserted nests of wood-ants (termites)."

Genus **AMAZONA** Less.

Amazona Lesson, *Traité d'Orn.* p. 189, 1830. Type *A. pulverulenta* (Gmel.) = *A. farinosa* (Bodd.).

The members of this genus are fairly large birds, chiefly green in colour, with the tail somewhat short and rounded and the orbital ring complete.

Key to the Species.

- A. Lower back and rump green.
 - a. Wing-speculum bright red.
 - a'. Larger, wing more than 230 mm.; crown of head orange-yellow; sides of face green *A. farinosa*, p. 319.
 - b'. Smaller, wing less than 230 mm.
 - b''. Crown of head sulphur-yellow; lores blue; cheeks yellow *A. amazonica*, p. 320.
 - c''. Crown of head yellow; lores and cheeks green *A. ochrocephala*, p. 322.
 - b. Wing-speculum bright orange.
 - c. Head yellow tinged with green; sides of face and sides of neck blue *A. dufresniana*, p. 325.
- B. Lower back and rump red.
 - c. No wing-speculum.
 - d. Forehead and fore part of head dull red; loreal streak blackish *A. bodini*, p. 326.
 - e. Base of forehead and loreal streak dark crimson *A. festiva*, p. 327.

206. *Amazona farinosa*.

MEALY AMAZON.

- Psittacus farinosus* (Bodd.), *Tabl. Pl. Enl.* p. 52, 1783 (Cayenne).
Psittacus pulverulentus Cab. in Schomb. *Reis. Guian.* iii. p. 724, 1848.
Chrysotis farinosa Salvin, *Ibis*, 1886, p. 69 (Camacusa, Bartica Grove);
 Salvad. Cat. B. Brit. Mus. xx. p. 280, 1891; Lloyd, *Timchri* (2) ix.
 p. 271, 1895; id. op. cit. xi. p. 7, 1897 (Rupununi River).
Amazona farinosa Beebe, *Our Search for a Wilderness*, pp. 174, 201
 (Hoorie Creek), p. 233 (Moruka), p. 234 (Pomeroon River), 1910;
 Brabourne & Chubb, *B. S. Amer.* i. p. 89, no. 833, 1912.

"Saurama" (*Lloyd*).

Adult male. General colour above and below green; outer primary black, the remainder of the primary-quills black on the apical portion, and the inner webs of the secondary-quills also black; edge of wing and outer webs of the four outer secondary-quills bright scarlet; tail paler green at the tip and inclining to yellow on the inner webs of the feathers on the apical portion; the feathers on the nape and hind-neck have dark edges; middle of crown yellow. "Bill horn-colour; feet blackish-grey."

Total length 410 mm., culmen 40, wing 242, tail 139, tarsus 26.

The description of the male is based on an example collected on the Abary River in July 1906.

Adult female. Similar to the adult male in most respects, but differs in the absence of the yellow patch on the crown of the head. Wing 220 mm.

The female described is in the British Museum and was collected by Whitely at Bartica, September 19th, 1879—Salvin-Godman Collection.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Bartica, Kamakabra River, Bonasika River, Abary River, Corentyne River (*McConnell* collection); Bartica, Kamakusa (*Whitely*); Hoorie River, Moruka River, Pomeroon River (*Beebe*).

Extralimital Range. Cayenne (*Boddaert*), Surinam (*Penard*), North Brazil.

Habits. According to Schomburgk (*Reis. Guian.* iii. p. 724) this is one of the largest of the Parrots as well as one of the most common birds in the Colony. The "Macusis" call it *Worokeh* and the "Warraus" *Torom*.

Mr. C. A. Lloyd, writing on some Guiana Parrots, remarks (*Timehri* (2) ix. p. 271):—"The 'Saurama' (*C. farinosa*) is one of the largest of its genus found in this part of Guiana."

207. *Amazona amazonica*.

ORANGE-WINGED AMAZON.

Psittacus amazonicus Linn. Syst. Nat. 12th ed. i. p. 147, 1766 (Surinam).

Psittacus æstivus (nec Linn.), Cab. in Schomb. Reis. Guian. iii. p. 725,

1848; Brown, Canoe and Camp Life, p. 327, 1876 (Corentyne River).

Chrysotis amazonica Salvin, Ibis, 1886, p. 69 (Camacusa, Roraima, 3500 ft.); Salvad. Cat. B. Brit. Mus. xx. p. 283, 1891 (Takutu River); Lloyd, Timehri (2) ix. p. 271, 1895.

Amazona amazonica Brabourne & Chubb, B. S. Amer. i. p. 89, no. 836, 1912.

“Screecher” (*Brown, Lloyd*).

Adult female. General colour above and below green with dark edges to the feathers on the nape, hind-neck, and sides of neck; fore part of head and edge of wings pale yellow; sides of face orange-yellow; the three outer secondary-quills bright scarlet on the outer webs; apical portion of flight-quills black; tail for the most part green, much paler at the tip, the outer feathers red on the basal portion of the inner webs and a subterminal red band. “Bill light horn-colour, with the tip dusky; feet dusky; iris red-orange.”

Total length 310 mm., culmen 31, wing 185, tail 94, tarsus 23.

The female described was collected on the Abary River in September 1907.

Adult male. Similar to the adult female in the colour of the plumage. Wing 200 mm.

The description of the male is taken from an example in the British Museum, collected by Whitely at Mount Roraima on January 4th, 1882—Salvin-Godman collection.

Breeding-season. Unknown in British Guiana.

Nest. The nest is made in the holes of hollow trees (*Schomburgk*).

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Supenaam River, Bartica, Bonasika River, Abary River (*McConnell collection*); Waini River (*Schomburgk*); Corentyne River, Parua Island (*Brown*); Kamakusa, Mount Roraima, 3500 ft., Takutu River (*Whitely*).

Extralimital Range. Surinam (*Linne*), Trinidad, Venezuela, Colombia, Eastern Peru, Brazil.

Habits. According to Schomburgk (Reis. Guian. iii. p. 725) this is the commonest Parrot in British Guiana. It prefers the coast-woods to those inland, and is very fond of climbing about in the *Avicenna* bushes. In the morning innumerable birds start out in pairs to their feeding-grounds, flying very high and uttering

their unpleasant and powerful calls. It is a very noisy bird and always emitting its shrill voice. That is why the settlers and natives have given it the name of Screecher. On the Waini River he once observed an enormous flock settle on the trees on the borders of that river. They bent the thinner branches downwards with their weight, and the noise they made was ear-splitting. He was surprised to see lots of the birds drinking the somewhat salt water, as the distance from the coast was not very far. The flesh of the young birds was very savoury—it was therefore much hunted and sold to the settlers. It is very commonly kept in captivity. During the breeding-season it lives in pairs, at which time it appears to lose its voice. The nest is made in the holes of hollow trees. Like all other Parrots it feeds its young with half-digested food, which it brings up from its crop. The young are only fed twice a day—at 11 in the morning and 5 o'clock in the afternoon. The natives used to fell the trees in which the Parrots nested in order to secure the young.

We quote the following note from Mr. Barrington Brown (Canoe and Camp Life, p. 327):—"Just before dusk immense numbers of Parrots, of the kind called 'Screechers,' flew over us, making for Parua Island, where they settled on low trees. They appeared to be in a most excited condition, constantly screeching and rising up in hundreds over the trees, where they hovered and resettled at intervals, until night closed in and put a stop to their flittings."

Mr. C. A. Lloyd, writing on Guiana Parrots, remarks (Timehri (2) ix. p. 271):—"The 'Screecher'" (*Chrysotis amazonica*) is one of the commonest Parrots occurring here. Of our native Parrots the Amazon is undoubtedly the best talker."

208. *Amazona ochrocephala*.

YELLOW-HEADED AMAZON.

Psittacus ochrocephalus Gmel. Syst. Nat. i. p. 339, 1788 (Colombia); Cab. in Schomb. Reis. Guian. iii. p. 724, 1848.

Chrysotis ochrocephala Salvin, Ibis, 1886, p. 69 (Bartica Grove, Camacusa); Salvad. Cat. B. Brit. Mus. xx. p. 289, 1891; Lloyd, Timehri (2) ix. p. 271, 1895.

Amazona ochrocephala Beebe, Our Search for a Wilderness, pp. 135, 146, 1910 (Barima); Brabourne & Chubb, B. S. Amer. i. p. 89, no. 841, 1912.

"Common Screecher Parrot" (*Quelch*); "Yellow-fronted Amazon Parrot" (*Beebe*).

Adult female. Upper and under surface green with dark edges to the feathers on the nape, hind-neck, scapulars, sides of neck, hinder cheeks, fore-neck, breast, and abdomen; fore part of head yellow; outer secondaries green on the outer webs next to the wing-speculum and blue at the tips, the inner ones green on the outer webs as also at the tips, the innermost secondaries entirely green; carpal edge of the wing and outer webs of the outer secondary-quills bright red; the apical portion of flight-quills has the outer webs blue and the inner ones black; tail green, paler at the tip, basal portion of the outer feathers red. "Bill blackish with the base of the upper mandible flesh-colour; feet dark grey; iris red, with an inner yellow ring."

Total length 353 mm., culmen 34, wing 220, tail 121, tarsus 23.

The female from which the description is taken was collected on the Abary River in September 1907.

Adult male. Similar to the adult female, but does not show the dark edges to the feathers to the same extent as mentioned in the description of the female. Wing 208 mm.

The description of the male is taken from an example in the British Museum, collected by Mr. F. V. McConnell on the Rupununi Savannas and presented to the National Collection.

Breeding-season. Unknown in British Guiana.

Nest. "These birds usually nest in hollows in the tops of the tallest and most inaccessible trees. The entrance is rectangular, about three by six inches, and some five feet above the ground" (*Beebe*).

Eggs. "Three white eggs" (*Beebe*).

Range in British Guiana. Upper Takutu River, Abary River (*McConnell* collection); Barima River (*Beebe*); Bartica, Kamakusa (*Whitely*); Georgetown (*Quelch*).

Extralimital Range. Trinidad, Venezuela, Colombia, Ecuador, Eastern Peru.

Habits. Schomburgk states (*Reis. Guian. iii. p. 724*) that this bird is common in British Guiana and a large number are kept in confinement by the Indians. They take it from the nest when very young and carefully nurse it. These birds, as well as monkeys, are considered important articles of trade. Some of the birds' wings are usually cut, and the birds are then allowed to go quite free about the settlement—some, however, are not pinioned, and these

mix with the wild birds during the day and return to the settlement towards evening. They pick up the different sounds in the settlement and imitate the crowing of the cock, barking of the dogs, the crying of the children, etc. The fondness shown by the parrots and monkeys to the native children is very striking, and he had rarely seen any of the latter at play without a monkey or parrot taking part.

The savoury flesh of this bird, its fine plumage, and the ease with which it is tamed makes it much sought after.

At dawn innumerable pairs emerge from the woods, and towards dusk return, calling wildly all the time. They are especially fond of the shoots of the leguminosæ trees, and when a hundred are feeding on a tree one only hears a subdued murmur from them, and the falling of the empty pods makes a considerable rustling among the undergrowth. It requires a keen eye to discover a bird among the foliage. When a flock leaves a tree they usually utter their unpleasant wild cry. This bird nests in holes in trees, often using those made by Woodpeckers. The "Macusis" call it *Worrokeh*.

Mr. C. A. Lloyd, writing on Guiana Parrots, remarks as follows (Timehri (2) ix. p. 271) :—"Three other species of the genus *Chrysotis* have been reported from here, but they are not so commonly seen except as cage-birds. One, *C. ochrocephala*, the true Amazon, is only obtained far in the interior and never appears to visit the coast. The Indians assert that this species frequently breeds in company with *C. amazonica*, and that young birds of both species are often taken from the same nest. It is not uncommon to meet with specimens of *C. ochrocephala* having the feathers alternately green and yellow, giving the bird a checkered appearance; this abnormal arrangement of plumage is said to be due to their feeding exclusively on Indian corn."

Mr. Beebe (Our Search for a Wilderness, p. 66) writes :—"The big Yellow-fronted Amazon Parrot. These birds usually nest in hollows in the tops of the tallest and most inaccessible trees. The entrance is rectangular, about three by six inches, and some five feet above the ground. We cut a hole in the trunk near the ground, and there find the nest of the Parrot. Three white eggs, one of which is pipped, and a young bird just hatched reward us, all resting on a bed of chips. The diminutive Polly is scantily clothed with white down."

Mr. J. J. Quelch, writing on the Native Birds of Georgetown, remarks (Timehri (2) v. p. 107):—"The common Screecher Parrot (*Chrysotis ochrocephala*) may at times be seen, but at rare intervals."

209. *Amazona dufresniana*.

DUFRESNE'S AMAZON.

Psittacus dufresnians Shaw, Gen. Zool. viii. 2, p. 513, 1811 (Cayenne);

Cab. in Schomb. Reis. Guian. iii. p. 724, 1848.

Chrysotis cæligena Salvin, Ibis, 1886, p. 68 (Camacusa, Bartica Grove).

Chrysotis dufresniana Salvad. Cat. B. Brit. Mus. xx. p. 295, 1891;

Lloyd, Timehri (2) ix. p. 271, 1895.

Amazona dufresniana Brabourne & Chubb, B. S. Amer. i. p. 90, no. 844, 1912.

Adult male. General colour above and below green with dark edges to the feathers on the hind-neck and an inclination to yellow on the throat and under surface, these parts as well as the under wing-coverts being tinged with blue; top of head yellow tinged with green; an orange spot in front of the eye; sides of face and sides of neck lavender-blue; wing-speculum bright orange fading inwardly to yellow; tips of flight-quills bluish black, the innermost secondaries green, becoming yellowish green at the tips of the outer feathers, with a tinge of red at the base and on the sub-terminal portion of the feathers, as well as a bluish tinge on the outer web of the outermost feather. "Bill dusky with the base of the upper mandible red; feet grey."

Total length 370 mm., culmen 39, wing 200, tail 105, tarsus 22.

The description of the male is taken from a bird collected on the Demerara River in April 1874.

Adult female. Similar to the adult male. Wing 198 mm.

The description of the female is taken from a specimen in the British Museum collected at Bartica on the 10th of October, 1880, by H. Whitely—Salvin-Godman collection.

We notice in the series at the British Museum, as well as in that in the McConnell collection, that the amount of blue which pervades the face and underparts varies in each individual.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Bartica, Bonasika River, Deme-

rara River (*McConnell collection*) ; Sururu (*Schomburgk*) ; Kamakusa, Kamarang River (*Whitely*).

Extralimital Range. Surinam (*Penard*), Cayenne.

Habits. Schomburgk writes (*Reis. Guian. ii. p. 438*), near Pomeroon in the morning, waiting for the tide to come in. A large number of Parrots came over the boat and settled in the mimosa trees. He shot some for identification and for food, and they proved to be *P. dufresnii*—a species new to him.

Schomburgk also remarks (*op. cit. iii. p. 724*) that this beautiful species is less common than many of the others. He once, and once only, met with it near Sururu, but it was an innumerable flock. Its voice is somewhat different from the other species.

Mr. C. A. Lloyd, writing on Guiana Parrots, remarks (*Timehri* (2) ix. p. 271) :—" *C. dufresniana* is not a rare species, but it is not very common, and is notable as being the only large green Parrot having the wing-speculum yellow ; found in the Colony ; it is said never to learn to speak."

210. *Amazona bodini*.

BODIN'S AMAZON.

Chrysotis bodini Finsch, P. Z. S. 1879, p. 569, pl. 49 (Middle Orinoco) ; W. L. Sclater, Ibis, 1887, p. 318 (Barima River) ; Salvad. Cat. B. Brit. Mus. xx. p. 307, 1891 ; Lloyd, *Timehri* (2) ix. p. 272, 1895.

Amazona bodini Brabourne & Chubb, B. S. Amer. i. p. 90, no. 851, 1912.

Adult. General colour above and below green with dark narrow fringes to the feathers ; bastard-wing, primary-coverts, and primary-quills bluish green, outer primary almost entirely black like the inner webs of the primary and secondary quills, outer webs of secondary-quills green like the back ; lower back and rump bright scarlet ; upper tail-coverts paler than the back and more yellowish green like the tips of the tail-feathers ; fore part of head dark rose-colour ; throat and sides of face bluish green, nape green with a purplish tinge ; edge of wing yellow ; under wing-coverts bluish green ; under tail-coverts pale green with yellow bases. " Bill and cere blackish ; feet dark plumbeous ; iris yellow, with an outer circle of red " (*Finsch*).

Total length 320 mm., culmen 32, wing 195, tail 107, tarsus 22.

This species is not represented in the *McConnell collection*,

and the description is taken from a specimen in the British Museum collected by Mr. W. L. Sclater on the Barima River—Sclater collection.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Barima River (W. L. Sclater).

Extralimital Range. Venezuela.

Habits. Mr. C. A. Lloyd writes (Timehri (2) ix. p. 272):—"The Red-backed Parrot, *C. bodini*, is a very rare bird in British Guiana, but we are told that it is common enough in Brazil. We have only seen a few specimens of this fine Parrot, and they were all in a domesticated state."

211. *Amazona festiva*.

FESTIVE AMAZON.

Psittacus festivus Linn. Syst. Nat. 10th ed. i. p. 101, 1758 (Guiana);
Cab. in Schomb. Reis. Guian. iii. p. 724, 1848.

Chrysotis festiva Salvin, Ibis, 1886, p. 68; Salvad. Cat. B. Brit. Mus.
xx. p. 307, 1891.

Amazona festiva Brabourne & Chubb, B. S. Amer. i. p. 90, no. 852,
1912.

Adult. General colour above and below green; fore part of head red, more or less tinged with pale green, with a wash of blue over the hinder part of the head which extends on to the sides of the crown, where it is more pronounced; lower back and rump bright red; primary-quills blackish, more or less blue on the outer webs; throat also tinged with blue. "Bill and feet dusky; iris yellow-orange."

Total length 315 mm., culmen 28, wing 185, tail 102, tarsus 19.

We do not know the exact locality, in British Guiana, of the specimen from which the description is taken.

Adult male. General colour above and below green; bastard-wing, primary-coverts, and quills blackish tinged with blue on the outer webs of the primaries, outer webs of secondaries green with blue at the tips; innermost secondaries green like the back; lower back and rump bright scarlet; upper tail-coverts and tips of tail-feathers yellowish green; outermost pair of tail-feathers dull red at the base on the outer web, and edged with purplish blue; base of

forehead dull crimson followed by yellowish green ; a patch on the throat and sides of crown blue with a tinge of the same colour on the nape ; sides of face green tinged with blue ; under wing-coverts and quill-lining bluish green. Iris red.

Total length 300 mm., culmen 32, wing 213, tail 97, tarsus 23.

Adult female. Similar to the adult male. Wing 201 mm.

The descriptions of the male and female are taken from examples in the British Museum ; the male was collected at Elvira, E. Peru, by J. Hauxwell, on the 30th of December, 1876—Selater collection, and the female lived in the Zoological Society's Gardens and is said to have come from Guiana—Selater collection.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Unrecorded.

Extralimital Range. Northern Brazil, Venezuela, East Peru.

Habits. Schomburgk states (Reis. Guian. iii. p. 724) that this bird is less common than the preceding species (*Touit purpurata*, p. 337). It is somewhat more numerous along the Rio Branco and the Rio Negro. In the former place he found it a common bird kept in confinement by the natives. It is, no doubt, the most intelligent of the South American Parrots. He had seen individuals that could whistle long tunes and talk most excellently. Even the Indians prize it considerably more than any of the other species. Its mode of life and habits are the same as those of other Parrots.

Genus **PIONUS** Wagl.

Pionus Wagler, Monogr. Psitt. p. 497 ; Abhan. Math. Phys. K. B. Akad. Mun. vol. i. 1830. Type *P. menstruus* (Linn.).

This genus is characterized by the absence of the tufted oil-gland, the nearly square tail, the red under tail-coverts, and the orbital ring complete.

Key to the Species.

- | | |
|---|-------------------------------|
| A. Back, abdomen, and under wing-coverts green | <i>P. menstruus</i> , p. 329. |
| B. Back black ; abdomen crimson-lilac ; under wing-coverts blue | <i>P. fuscus</i> , p. 330. |

212. *Pionus menstruus*.

RED-VENTED PARROT.

Psittacus menstruus Linn. Syst. Nat. 12th ed. i. p. 148, 1766 (Surinam);
Cab. in Schomb. Reis. Guian. iii. p. 723, no. 263, 1848.

Pionus menstruus Salvin, Ibis, 1886, p. 69 (Bartica Grove, Camacusa,
Merumé Mts., Roraima); Salvad. Cat. B. Brit. Mus. xx. p. 322,
1891; Beebe, Our Search for a Wilderness, p. 157, 1910 (Waini);
Brabourne & Chubb, B. S. Amer. i. p. 91, no. 857, 1912.

? *Psittacus maximiliani* Cab. in Schomb. Reis. Guian. iii. p. 723,
no. 264, 1848.

? *Caica maximiliani* Salvin, Ibis, 1886, p. 70.

Adult male. Entire back, wings, abdomen, axillaries, and under wing-coverts green; upper wing-coverts golden-green; entire head, neck all round, throat, sides of face, and breast blue; ear-coverts black; under tail-coverts and base of tail red, tips of the former green; upper and under surface of tail more or less blue at the tip. "Bill blackish, with red patch at the base of upper mandible; cere greyish; feet grey; iris brown."

Total length 255 mm., culmen 28, wing 186, tail 80, tarsus 17.

The male described was collected on the Kamakabra River.

Adult female. Similar to the adult male, but apparently rather smaller. Wing 175 mm.

According to Count Salvadori, the young bird is "greener on the head, neck, and upper breast, where the blue colour on the edges of the feathers is less developed than in the adult birds—sometimes a pinkish band mixed with blue on the forehead."

Breeding-season. Unknown in British Guiana.

Nest. The nests are placed in holes in trees (*Schomburgk*).

Eggs. Undescribed from British Guiana.

Range in British Guiana. Mount Roraima, Upper Takutu Mountains, Ituribisi River, Kamakabra River, Bonasika River, Makauria River, Anarica River (*McConnell collection*); Bartica, Kamakusa, Merumé Mountains (*Whitely*); Waini River (*Beebe*).

Extralimital Range. Surinam (*Linne*), Venezuela, Colombia, ? N.W. Ecuador, East Peru, Brazil.

Habits. According to Schomburgk (Reis. Guian. iii. p. 723, no. 263) this bird is found in the woods throughout British Guiana. In September and October it migrates in large flocks towards the woods near the coast, where it feeds on the ripe fruit

of the guava trees. During their sojourn there the birds are shot in large numbers and sold to the settlers. It roosts in the depths of the woods, which it leaves in the morning, uttering its call very loudly, and returns in the evening. During the breeding-season it lives in pairs, and one scarcely sees a solitary bird in the woods. Its nests are placed in holes in trees. It is easily tamed and kept as a pet by the natives. The "Macusis" call it *Tarisa* and the "Warraus" *Tomana*.

Regarding this doubtful species Schomburgk writes (Reis. Guian. iii. p. 723, No. 264=*Psittacus maximiliani*) that this beautiful Parrot—like No. 263=*Pionus menstruus*—repairs to the coast in large flocks during October and November, attracted by the ripe figs. It is shot in large numbers and eaten as game, the flesh being considered very savoury. During the breeding-season it lives in pairs, during which time one seldom meets with it in the woods. It nests in holes in the trees.

Mr. Beebe (Our Search for a Wilderness, p. 157) writes:—"A horde of Blue-headed Parrots were on their way up the coast. Closely massed though most of them were, yet the eternal two and two formation of the tribe of Parrots was never lost, and even when the vanguard, terrified by our puffing launch, wheeled and dashed back through the ranks behind, each Parrot flew always close to its mate. The Parrots screamed unceasingly, and near the main body the noise was terrific—a shrill deafening roar, as from a dozen factory whistles. Until long after dark they flew back and forth around us, sometimes attempting to alight in a tree and falling from branch to branch, almost to the water, before securing a foot- or beak-hold."

213. *Pionus fuscus*.

DUSKY PARROT.

Psittacus fuscus P. L. S. Müll. Syst. Nat. Suppl. p. 78, 1776 (Cayenne).

Pionus violaceus Salvin, Ibis, 1886, p. 501 (Carimang River).

Pionus fuscus Salvad. Cat. B. Brit. Mus. xx. p. 334, 1891 (Bartica Grove); Lloyd, Timnehri (2) ix. p. 273, 1895 (Essequebo River); Beebe, Our Search for a Wilderness, p. 344, 1910 (Aremu); Brabourne & Chubb, B. S. Amer. i. p. 92, no. 868, 1912.

Adult male. Back, upper wing-coverts, scapulars, rump, and upper tail-coverts black, with pale edgings to the feathers of the

mantle, scapulars, and lesser upper wing-coverts; crown of head blue as is also the fore part of the cheeks; the hinder cheeks whitish at the base of the feathers followed by blue and edged with lilac; ear-coverts black, a crimson spot at the base of the nostrils; primary-coverts, flight-quills, and tail ultramarine-blue; base of outer tail-feathers bright red, as are also the under tail-coverts; breast lilac-brown; abdomen crimson-lilac; axillaries, under wing-coverts, and quill-lining ultramarine-blue. "Bill greyish black, towards the base of upper mandible yellowish; feet greyish black; iris brown-black."

Total length 240 mm., culmen 26, wing 164, tail 76, tarsus 17.

According to Count Salvadori, the female is like the male, but we have examined a series of four males and four females in the British Museum, and observe that the females differ in having the greater upper wing-coverts and outer webs of the secondary-quills green instead of blue or bluish black. We notice also that the under wing-coverts and quill-lining in the female are paler and more greenish blue. Wing 163 mm.

Breeding-season. Unknown in British Guiana.

Nest. A hole in a tall dead kakeralli tree, about forty feet from the ground (*Beebe*).

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Supenaam River, Bartica, Makauria River, Abary River (*McConnell collection*); Bartica, Kamarang River (*Whitely*).

Extralimital Range. Cayenne (*P. L. S. Müller*), Northern Brazil.

Habits. Mr. Beebe writes (*Our Search for a Wilderness*, p. 344):—"Among the most interesting birds which we found nesting were the Dusky Parrots. About one hundred yards from the clearing we observed two Red-breasted Parrots fly from a hole about forty feet up in a tall dead kakeralli tree. We watched the tree morning and afternoon for several days, often for an hour at a time, but neither saw nor heard anything of the birds. Fearing we had been deceived in thinking they were nesting, we had a black cut down the tree, but no sooner had the dust settled from the debris of rotten wood, than a chorus of raucous cries arose, and four young Parrots nearly fledged were gathered into a hat. The quartet showed an interesting sequence of growth, there being several days' difference between each one. The youngest was clad only in quill-like blood-feathers; number two had the scapulars,

part of the crown, the breast, and a half inch of the tail-feathers out of the sheath. Number three was pretty well feathered, except for face, throat, under wings, and sides; while number four was to all intents and purposes a real Parrot. The way in which the old birds kept hidden was remarkable."

Mr. C. A. Lloyd (Timehri (2) ix. p. 273) writes as follows:—"A very common Parrot about our rivers is *Pionus fuscus*. . . . At certain times it is liable to be infested with wandering nematoid worms, and one we saw shot on the Essequebo River was so filled with these parasites as to render it a mystery how the bird could exist at all. The worms were about an inch long and almost transparent."

Genus **DEROPTYUS** Wagl.

Deroptylus Wagler, Monogr. Psitt. p. 492; Abhan. Math. Phys. K. B. Akad. Mun. vol. i. 1830. Type *D. accipitrinus* (Linn.).

This genus is distinguished by having a tufted oil-gland, the bill somewhat stout, the tail rather long, and the feathers on the nape and hind-neck long and erectile.

214. *Deroptylus accipitrinus*.

HAWK-HEADED CAIQUE.

Psittacus accipitrinus Linn. Syst. Nat. 10th ed. i. p. 102, 1758 (Guiana).

Deroptylus accipitrinus Cab. in Schomb. Reis. Guian. iii. p. 726, 1848; Salvin, Ibis, 1886, p. 69 (Camacusa, Merumé Mts.); Salvad. Cat. B. Brit. Mus. xx. p. 335, 1891; Lloyd, Timehri (2) ix. p. 272, 1895; Brabourne & Chubb, B. S. Amer. i. p. 92, no. 869, 1912.

"Hia-Hia," "Hawk-headed Parrot" (Lloyd).

Adult male. Back, rump, wings, tail, under wing-coverts, sides of body, and under tail-coverts green; flight-quills black, inner secondaries green on the outer webs; outer webs of outer tail-feathers bluish; the elongated feathers on lower hind-neck and sides of neck crimson-red, edged with blue at the tips; breast and abdomen similar, but the colours darker in tone, the tips of the feathers on the sides of the breast are edged with green; fore part of head dull white; fore part of cheeks, sides of face and nape dusky with white shaft-lines to the feathers; lower aspect

of tail-feathers and quill-lining black, or brownish black. "Bill dusky horn-colour; feet black; iris brown."

Total length 335 mm., culmen 32, wing 202, tail 154, tarsus 21.

The male from which the description is taken was collected on the Bonasika River.

Adult female. Similar to the adult male. Wing 192 mm.



Deropterus accipitrinus.

Fig. 62.—To illustrate the nape-frill.

The female described is in the British Museum, and was collected by Whitely at Kamakusa on the 11th of March, 1882—Salvin-Godman collection.

Breeding-season. Unknown in British Guiana.

Nest. It breeds in the holes of trees (*Schomburgk*).

Eggs. It lays two eggs (*Schomburgk*).

Range in British Guiana. Ituribisi River, Bartica, Bonasika River, Anarica River (*McConnell collection*); Merumé Mountains, Kamakusa (*Whitely*).

Extralimital Range. North Brazil.

Habits. Schomburgk writes (Reis. Guian. iii. p. 726) that this beautiful Parrot was distributed over the greater portion of British Guiana, though not so very common. It was, as a rule, seen in pairs, but rarely in small flocks. In its mode of life it differed somewhat from the preceding species = *Amazona aestiva*.

It prefers the lower forests and flies low, never high in the air. It appears to favour the settlements, where one often hears its long drawn-out note, "Hia-Hia," and this is the name by which the bird is known to the settlers and natives. It is rather a delicate bird and cannot stand any hardship, but it is easily tamed, though it did not talk easily. When angry it raises its beautiful neck-feathers, which form a kind of fan at the back of the head. It breeds in the holes of trees and lays two eggs.

The "Macusis" call it *Wanakia* and the "Warraus" *Paratakia*.

Mr. C. A. Lloyd, writing on Guiana Parrots, remarks as follows (Timehri (2) ix. p. 272):—"One of the most curious of the Guiana Parrots is the 'Hia-Hia,' *Derophtus accipitrinus*. Its erectile crest and hawk-like aspect have earned for it the name of the Hawk-headed Parrot, and will serve to distinguish it at once from any other species. It is generally met with in small flocks of from ten to twenty, though occasionally solitary pairs are seen, but these appear to be old birds."

Genus **PIONOPSITTA** Bonap.

Pionopsitta Bonaparte, Rev. Zool. 1854, p. 152. Type *P. pileata* (Scop.).

This genus is distinguished by the short tail, with its pointed feathers, which is less than half the length of the wing.

215. *Pionopsitta caica*.

CAICA PARROT.

Psittacus caica Lath. Ind. Orn. i. p. 128, 1790 (Cayenne).

Psittacus pileatus Cab. in Schomb. Reis. Guian. iii. p. 723, 1848.

Caica histrio Salvin, Ibis, 1886, p. 69 (Camacusa, Bartica Grove).

Pionopsitta caica Salvad. Cat. B. Brit. Mus. xx. p. 345, 1891 (Carimang River); Brabourne & Chubb, B. S. Amer. i. p. 93, no. 877, 1912.

Adult male. Entire back, wings, and tail green like the abdo-

men and under wing-coverts; outer aspect of wings and abdomen paler green than the back; head and sides of face black; collar on hind-neck rich orange with dark edges to the feathers; throat and fore-neck bronze-brown; bastard-wing, primary-coverts, and quills black with green edges to the outer webs; inner webs of tail-feathers yellow, outer webs green, and tipped with blue; under tail-coverts paler than the abdomen and more yellowish grey. "Bill horn-colour, cere darker; feet dusky; iris hazel" (*H. Whitely*).

Total length 210 mm., culmen 19, wing 148, tail 65, tarsus 15, middle toe and claw 24.



Pionopsitta caica.

Fig. 63.—To show the nearly square tail with its pointed feathers.

The male from which the description is taken was collected on the Ituribisi River.

Adult female. Similar to the adult male. Wing 157 mm.

Young birds differ from the adults chiefly in having the upper part of the head green.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Supenaam River, Bonasika River, Anarica River (*McCune's collection*); Bartica Kamakusa, Kamarang River (*Whitely*).

Extralimital Range. Surinam (*Penard*) and Cayenne.

Habits. According to Schomburgk (Reis. Guian. iii. p. 723), the habits and mode of life of this species are the same as those of *Pionites melanocephala*, p. 339.

Genus **TOUIT** Gray.

Touit Gray, Cat. Gen. & Subgen. Birds, p. 89, 1855. Type *T. hueti* (Temm.).

This genus is distinguished chiefly by the long upper and under tail-coverts, which reach to the tip of the tail.

Key to the Species.

- | | |
|---|-------------------------------|
| A. Back and rump black ; under wing-coverts and axillaries blue | <i>T. batavica</i> , p. 336. |
| B. Back green ; rump blue ; under wing-coverts and axillaries green | <i>T. purpurata</i> , p. 337. |
| C. Back and rump green ; under wing-coverts and axillaries bright red | <i>T. hueti</i> , p. 338. |

216. *Touit batavica*.

SCOPOLI'S PARROT.

Psittaca batavica Bodd. Tabl. Pl. Enl. p. 49, 1783 (Venezuela).

Urochroma cingulata Salvad. Cat. B. Brit. Mus. xx. p. 351, 1891 ; Lloyd, Timehri (2) ix. p. 272, 1895 (Groete Creek).

Urochroma batavica Brabourne & Chubb, B. S. Amer. i. p. 93, no. 881, 1912.

"Seven-coloured Parrakeet" (*Lloyd*).

Adult male. Back, rump, upper tail-coverts, and wings black ; greater upper wing-coverts yellow with blue tips ; outer webs of tertials yellow and green ; tail lilac with a subterminal black band on the outer feathers ; forehead, lores, and chin yellow ; crown of head, hinder face, throat, abdomen, and under tail-coverts pale green ; nape dull yellow with narrow dark edges to the feathers, which gives a scaled appearance ; breast blue-green ; edge of wing red ; under wing-coverts dull blue. "Bill whitish yellow ; feet pale ; iris brown" (*Léotaud*).

Total length 165 mm., culmen 15, wing 118, tail 50, tarsus 12.

The male described was collected on the Supenaam River.

Adult female. Similar to the adult male in the colour of the

plumage, but apparently smaller. Wing 107 mm. "Iris sherry-coloured; legs yellow-brown."

The description of the female is taken from an example in the British Museum, collected in Trinidad on December the 29th, 1905, and presented by Mr. Collingwood Ingram.

Although there is a fair number of specimens, of this species, in the National Collection, this is the only one that has the sex identified.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Supenaam River, Mazaruni River (McConnell collection); Groete Creek (C. A. Lloyd).

Extralimital Range. Trinidad, Venezuela.

Habits. Regarding this species Mr. C. A. Lloyd writes (Timehri (2) ix. p. 272):—" *Urochroma cingulata* is a perfect gem, and is known to the 'Bovianders' as the 'Seven-coloured Parakeet.' It was once very plentiful in the neighbourhood of Groete Creek, but of late years its numbers have from some unknown cause become greatly diminished."

217. Touit purpurata.

PURPLE GUIANA PARROT.

Psittacus purpuratus Gmel. Syst. Nat. i. p. 350, 1788 (Cayenne); Cab. in Schomb. Reis. Guian. iii. p. 723, 1848.

Urochroma purpurata Salvin, Ibis, 1886, p. 70 (Partica Grove, Roraima); Salvad. Cat. B. Brit. Mus. xx. p. 353, 1891; Brabourne & Chubb, B. S. Amer. i. p. 93, no. 883, 1912.

Adult male. General colour above and below green; lower back dark blue, small scapulars brown, outer tail-feathers red tipped with black; crown of head brown, inclining to yellowish green on nape and sides of the neck; edge of wing purple; sides of body inclining to golden yellow; long under tail-coverts green and equal to the length of the tail. "Bill lead-colour, yellow towards the tip; feet grey."

Total length 170 mm., culmen 15, wing 122, tail 46, tarsus 10.

Adult female. Differs from the male in having the lateral tail-feathers subterminally banded with green and tipped with black. Wing 110 mm.

The birds from which the descriptions are taken were collected on the Mazaruni River:

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Supenaam River, Bartica, Kamakabra River, Bonasika River, Mazaruni River (*McConnell collection*); Kuamuka (*Schomburgk*); Kamarang River, Mount Roraima (*Whitely*).

Extralimital Range. North-eastern Brazil.

Habits. Regarding this bird Schomburgk states (*Reis. Guian.* iii. p. 723) that this beautiful Parrot, in the narrative of the journey, was wrongly named *P. madagascariensis* (*cf.* vol. ii. p. 421); it was labelled M. at that time in the Berlin Museum. According to the Indians it is found at certain times in the vicinity of Kuamuka.

218. Touit hueti.

HUET'S PARROT.

Psittacus hueti Temm. Pl. Col. iv. pl. 491, 1830 (Peru).

Urochroma hueti Salvad. Cat. B. Brit. Mus. xx. p. 355, 1891 (British Guiana?); Lloyd, Timehri (2) ix. p. 273, 1895 (Berbice); Braubourne & Chubb, B. S. Amer. i. p. 93, no. 885, 1912.

Adult male. Lower back, rump, and upper tail-coverts grass-green like the scapulars, innermost upper wing-coverts, and outer edges of inner secondary-quills; outer upper wing-coverts dull purplish blue; bastard-wing and primary-coverts black with a slight tinge of blue; primary-quills blackish with the outer edges green; tail crimson red, or violet purple, with a subterminal black bar and green tips to the feathers; crown of head, hind-neck, sides of neck, and mantle pale bronze-green; base of forehead blackish; feathers over the eye, cheeks, and throat green; feathers in front of the eye pale blue like the thighs; fore-neck, breast, abdomen, and short under tail-coverts yellowish green, the long outer tail-coverts yellow; carpal-patch, under wing-coverts, and axillaries bright scarlet.

Total length 170 mm., culmen 14, wing 48, tail 42, tarsus 11.

Adult female. Differs from the adult male in having the tail green, with a black subterminal bar to some of the feathers and yellow webs to the lateral ones; the top of the head is inclining to ochreous-brown, in the bird described.

This species is not represented in the McConnell collection, and the birds described are in the British Museum. The male was collected at Sarayacu, Ecuador, by C. Buckley—Salvin-Godman collection, and the female at Chamicuros, E. Peru—Gould collection.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Berbice (C. A. Lloyd).

Extralimital Range. Eastern Peru, Eastern Ecuador, ?Venezuela, ?Trinidad.

Habits. Mr. C. A. Lloyd, writing on some Guiana Parrots, remarks (Timehri (2) ix. p. 273) :—"The two other species of *Urochroma* are not so beautifully attired, *U. lueti* being green marked with blue on the forehead and cheeks, and having the axillaries scarlet. The tiny Love-birds are too well known to need description. They are among the smallest representatives of the Parrot tribe, and though rather noisy they make amusing and graceful pets. Their head-quarters in this country appear to be in Berbice, from which locality most of those we see on sale in town are obtained. Mr. von Ziegesar, who resided in Berbice for a long while, informs us that he once possessed a pair of Love-birds which from time to time became the parents of twenty-four young ones, but these the old birds invariably killed and ate."

Genus **PIONITES** Heine.

Pionites Heine, Nomencl. Mus. Hein. Orn. p. 231, 1890. Type *P. melanocephalus* Linn.

This genus is distinguished chiefly by the short and stout bill, and by the wing formula, which has the third and fourth primaries longest.

219. **Pionites melanocephala.**

BLACK-HEADED CAIQUE.

Psittacus melanocephalus Linn. Syst. Nat. 10th ed. i. p. 102, 1758 (Cayenne); Cab. in Schomb. Reis. Guian. iii. p. 723, 1848.

Caica melanocephalus Salvin, Ibis, 1886, p. 69 (Bartica Grove, Camacusa, Merumé Mts.).

Caica melanocephala Salvad. Cat. B. Brit. Mus. xx. p. 358, 1898; Lloyd, Timehri (2) ix. p. 273, 1895 (Mazaruni and Puruni Rivers).

Pionites melanocephala Brabourne & Chubb, B. S. Amer. i. p. 94, no. 889, 1912.

Adult male. Back, wings, and tail green, the last fringed with buff at the tip; lateral upper tail-coverts margined with orange; flight-quills black with green on the outer margins; head black, with a patch of green in front and below the eye; sides of face, chin, throat, and a collar round the hind-neck pale orange; breast and abdomen pale buff; sides of body, thighs, and under tail-coverts bright orange; under wing-coverts green with a few golden-yellow feathers intermixed. "Bill horn-black; feet and naked skin round the eyes black; iris with an inner ring brown and an outer one red."

Total length 238 mm., culmen 23, wing 145, tail 71, tarsus 17.

The male described was collected on the Abary River in September 1906.

Adult female. Similar to the adult male. Wing 140 mm.

Breeding-season. Unrecorded in British Guiana.

Nest. "Nests in holes high up the trunks of trees" (C. A. Lloyd).

Eggs. "We often tried to get at the eggs but could never succeed" (C. A. Lloyd).

Range in British Guiana. Ituribisi River, Bartica, Bonasika River, Makauria River, Abary River, Cako River (*McConnell collection*); Bartica, Kamakusa, Merumé Mountains (*Whitely*); Mazaruni and Puruni Rivers (C. A. Lloyd).

Extralimital Range. Venezuela, North Brazil.

Habits. Schomburgk states (Reis. Guian. iii. p. 723) that this bird lives in flocks in the woods, but is one of the rarer species. The "Macusis" call it *Sackuih* and the "Warraus" *Tischih*.

Mr. C. A. Lloyd remarks as follows (Timehri (2) ix. p. 273):—" *Caica melanocephala* is one of our handsome little Parrots that takes readily to domestication, becoming very affectionate, allowing itself to be handled and petted without the slightest resentment. It is particularly plentiful on the Mazaruni and Puruni Rivers, where it nests in holes high up the trunks of trees. We have often tried to get at the eggs, but could never succeed."

Order CORACIIFORMES.

Family STEATORNITHIDÆ.

This family consists of one genus and one species only which has the appearance of a Goatsucker. The osteological characters,

however, separate it widely from its apparent relatives. The bill is strong and hawk-like, being sharply hooked at the tip, with a small gape, and laterally compressed. The rictal bristles well developed. The wings are long. The tail long and rounded. The legs and feet are small, the toes rather long and naked, except for a few hair-like bristles which are very sparsely distributed, and the claws are sharply curved. The distribution is restricted to the northern portion of South America.

Genus **STEATORNIS** Humb.

Steatornis Humboldt, Recueil Observations de Zoologie et d'Anatomie Comparée, ii. p. 141, 1817. Type *S. caripensis* Humb.

The characters of this genus are the same as those given under the family.

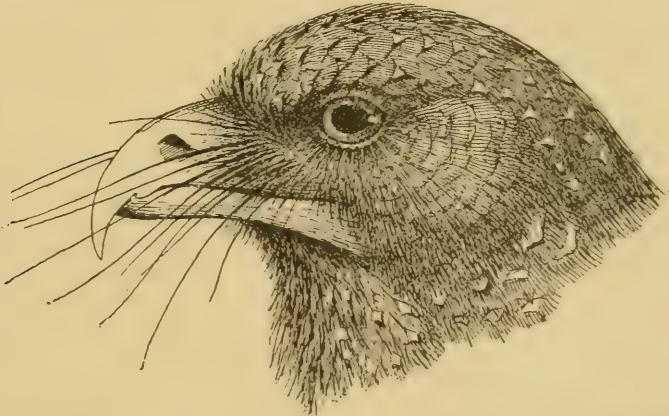


Fig. 64.—To show the form of the bill and the long rictal bristles.



Fig. 65. To illustrate the long toes and sharply curved claws.

220. *Steatornis caripensis*.

OIL-BIRD.

Steatornis caripensis Humb. Recueil Obs. Zool. Anat. Comp. ii. p. 141, 1817 (Caripé, Venezuela); Brown, Canoe and Camp Life, p. 386, 1876 (Upper Mazaruni); Salvin, Ibis, 1885, p. 439 (Roraima); Hartert, Cat. B. Brit. Mus. xvi. p. 653, 1892; Brabourne & Chubb, B. S. Amer. i. p. 94, no. 893, 1912.

“Salies” or “Guacharo birds” (*Brown*).

Adult. General colour above rufous brown with blackish mottlings and cross-bars, which are generally distributed; wings somewhat brighter than the back; the feathers on the head, hind-neck, and lesser upper wing-coverts have white arrow-head spots, those on the lateral upper wing-coverts take the form of bars more or less; the feathers round the bend of the wing for the most part white mottled or barred with pale brown; bastard-wing and primary-coverts somewhat darker than the back; the primary-quills and some of the outer secondary-quills are spotted with white on the outer webs, like the back, and the inner webs incompletely barred or spotted with white; the innermost secondaries like the back, the tips of the primaries show golden reflections in some lights; tail somewhat brighter and more rufous than the back, narrowly edged with white at the tip, and spotted with white on the outer web of the lateral feathers, there being also an indication of white marks on one of the middle feathers; crown of head more rufous than the back; the feathers surrounding the eye, and those at the base of the bill bristly in texture and rufous in colour; sides of face and throat vinous, the feathers barred or spotted with white; remainder of the under surface ashy vinous with white arrow-head spots to the feathers, those on the under tail-coverts and under wing-coverts assuming the form of bars.

Total length 470 mm., culmen 35, wing 317, tail 207, tarsus 19.

This species is not represented in the McConnell collection, and the description is taken from a specimen in the British Museum collected by Whitely at Mount Twekquay, Kamarang River, on November 17th, 1885.

The male and female appear to be alike, so far as we can judge from the series in the National Collection.

The nestling is very sparsely covered with down, and appears to moult direct into full-plumaged feathers, without going through an intermediate stage.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Mount Roraima, Mount Tweekquay, Kamarang River (*Whitely*).

Extralimital Range. Trinidad, Venezuela, Colombia, East Ecuador.

Habits. We quote the following notes from Mr. Barrington Brown (*Canoe and Camp Life*, p. 386):—"Our guide pointed out a cave in which he said the Salies or Guacharo birds live. Wishing to see them, we ascended the slope to it, arriving at a great vertical rent in the rocks, some ten feet wide and fifty feet high.

"The Indians halloed and threw stones up amongst the ledges of rock in the recess of the cave, causing the birds to utter a strange squeaking cry, but without starting any from their hiding-places. Upon the uneven floor were numbers of nuts of the Turu Palm, which had been swallowed by these birds, and disgorged after the thin pulpy covering had been digested.

"The Indians had a bush-rope, made fast on the cliff above, let down through a hole in the roof, which they used for climbing up to dislodge the young Salies from their nests on the ledges. They eat these young birds and make oil from their fat."

Family *ALCEDINIDÆ*.

The South American members of this family have long and pointed bills, laterally compressed. The nostrils are linear in shape and placed at the base of the upper mandible, close to the culmenal ridge, the hinder portion being feathered. The wings are median in length, the second and third primary-quills being longest and equal. The tails are comparatively short and nearly square. The feet are small and the toes four in number, three of the latter being directed forward, and the claws are sharply curved.

Genus **MEGACERYLE** Kaup.

Megaceryle Kaup, Fam. Eisev. p. 8, 1848. Type *M. maxima* (Pallas): Miller, Bull. Amer. Mus. Nat. Hist. xxxi. p. 287, pls. xxv., xxvi., 1912.

The members of this genus are birds of large size, the wing being more than 150 mm. and the tail almost square.

Key to the Species.

- A. Smaller, wing less than 180 mm.; under tail-coverts white in both male and female . *M. alcyon*, p. 344.
 B. Larger, wing more than 180 mm.; under tail-coverts white in the male and chestnut in the female *M. torquata*, p. 345.

221. *Megaceryle alcyon*.

BELTED KINGFISHER.

Alcedo alcyon Linn. Syst. Nat. 10th ed. i. p. 115, 1758 (Carolina).

Ceryle alcyon Quelch, Timehri (2) x. p. 263, 1896 (Coast of British Guiana); Brabourne & Chubb, B. S. Amer. i. p. 95, no. 897, 1912.

Megaceryle alcyon Miller, Bull. Amer. Mus. Nat. Hist. xxxi. p. 294, 1912.

Adult male. Head, back, wings, tail, and a band across the breast pale slate-grey, the feathers spotted or edged with white on the wings, tail, cheeks, and the band across the breast; bastard-wing, primary-coverts, and quills blackish, the quills more or less marked with white, especially towards the base, the secondaries slate-grey on the outer webs, the innermost almost entirely grey; inner webs of tail-feathers blackish barred with white; head crested; a portion of the lower eyelid, a spot above and in front of the eye, throat and a collar almost encircling the neck white, as is also the breast, abdomen, under tail-coverts, axillaries, and under wing-coverts, the greater series of the last and sides of the body more or less marked with grey.

Total length 315 mm., culmen 48, wing 162, tail 85, tarsus 10.

Adult female. Similar to the adult male, but differs in having a chestnut band across the lower breast, which colour extends down the sides of the body. Wing 156 mm.

This species is not represented in the McConnell collection, and the descriptions are taken from specimens in the British Museum.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. On the coast (*Quelch*).

Extralimital Range. Venezuela, Colombia, Central and North America.

Habits. Mr. J. J. Quelch, writing on the Migratory Birds in British Guiana, remarks (Timehri (2) x. p. 263):—"Another special example of migrant is to be found in the northern Kingfisher (*Ceryle alcyon*), of which two examples have been found on the coast. This migrant of the northern regions is known to descend to several parts of Central America and the West Indies, but the Guianas would seem to be its extreme range southwards."

This is the first and only record we have of the occurrence of this species in British Guiana.

222. *Megaceryle torquata*.

GREAT GREY KINGFISHER

Alcedo torquata Linn. Syst. Nat. 12th ed. i. p. 180, 1766 (Mexico);
Cab. in Schomb. Reis. Guian. iii. p. 703, 1848.

Ceryle torquata Salvin, Ibis, 1886, p. 60 (Camacusa, Merumé Mts., R. Atapurau); Quelch, Timehri (2) iv. pp. 102, 317, 1890 (Demerara River); Lloyd Price, op. cit. (2) v. p. 66, 1891; Quelch, tom. cit. p. 95 (Georgetown); Sharpe, Cat. B. Brit. Mus. xvii. p. 121, 1892 (River Atapuro); Beebe, Our Search for a Wilderness, pp. 163, 199, 281, 1910 (Barima, Hoorie, Aremu); Brabourne & Chubb, B. S. Amer. i. p. 95, no. 895, 1912.

Megaceryle torquata Miller, Bull. Amer. Mus. Nat. Hist. xxxi. p. 295, 1912.

"The Large-collared Kingfisher" (*Quelch*).

Adult male. Head and elongated crest, sides of face, back, wings, and tail slate-grey, with black shaft-lines, and white dots to many of the feathers; bastard-wing, primary-coverts, and quills black edged with grey, the last tipped and barred with white on the inner webs and white spots on outer webs in a few cases; lores, a band round the hind-neck, and throat white; breast and abdomen deep chestnut; under tail-coverts barred and spotted with grey; axillaries white, also barred with grey; under wing-coverts white, with dark shaft-lines to some of the feathers. "Bill black, the lower mandible and base of the upper one

reddish grey; feet yellowish grey; claws black; iris dark brown."

Total length 415 mm., culmen 75, wing 192, tail 110, tarsus 12, middle toe and claw 30.

Adult female. Differs from the adult male in having a broad band of grey across the chest; the under tail-coverts, under wing-coverts, and axillaries deep chestnut like the abdomen. Wing 188 mm.

We do not know the exact locality, in British Guiana, of the birds described.

Breeding-season. Unrecorded in British Guiana.

Nest. "In holes in the bank" (*Lloyd Price*); "it builds its nest at the end of a long tunnel excavated in the steep banks on the sides of the rivers" (*Schomburgk*).

Eggs. "The eggs are of a glossy white" (*Lloyd Price*).

Range in British Guiana. Upper Takutu Mountains (*McConnell collection*); Kamakusa, Merumé Mountains, Kamarang River (*Whitely*); Georgetown, Demerara River (*Quelch*); Barima River, Hoorie River, Aremu River (*Beebe*).

Extralimital Range. South America generally and Central America from Panama to Mexico.

Habits. Of this bird Schomburgk writes (*Reis. Guian.* iii. p. 703):—"This is the largest of the Kingfishers found in British Guiana. It haunts the borders of the rivers, where it sits on a dead branch that projects over the water watching for prey in a similar manner to that of the Common Kingfisher of Europe. When sailing up the rivers we have driven this bird before us for an hour at a time. It emits a loud call when taking flight, flies for a short distance, and rests again on a projecting branch. When tired it flew across the river and returned to its original perch. It builds its nest at the end of a long tunnel excavated in the steep banks on the sides of the rivers. On the Upper Essequibo River he observed a large number of these tunnels. This bird lays two eggs. The "Warraus" call it *Hapitataka* and the "Macusis" *Sackaiaka*.

Mr. Lloyd Price, writing on the Nests and Eggs of some Guiana birds, remarks (*Timehri* (2) v. p. 66):—"Several varieties of Kingfisher, one a large handsome greyish-blue bird (*Ceryle torquata*), dart up and down the numerous trenches and waterways, and are plentiful in the small creeks; the eggs, of a glossy white, are laid in holes in the bank."

Mr. J. J. Quelch observed this species in Georgetown, and

remarks (Timehri (2) v. p. 95):—"Occasionally the Large-collared Kingfisher (*Ceryle torquata*) will be seen, either near the lakes in the Botanic Gardens or along the Lamaha canal at the back, perching on the branches or dry sticks overhanging the water; but as it is rarely to be seen, and few in number, no more detailed mention of it is necessary."

We also quote the following note by Mr. Quelch (Timehri (2) iv. p. 102), who met with the species on the Upper Demerara River, where he says that it frequents the waterside. On p. 317 he remarks that:—"The base of the hill is riddled with nest-holes of various species of Kingfisher, chiefly *Ceryle torquata*, which seem to congregate here in large numbers during the breeding-season."

Mr. Beebe observes (Our Search for a Wilderness, p. 163):—"Two big Red-breasted Kingfishers spring from their perch and come leaping toward us through the air, suddenly wheeling up almost in a somersault and down, like two meteors into the water."

Genus **CHLOROCERYLE** Kaup.

Chloroceryle Kaup, Fam. Eisv. p. 8, 1848. Type *C. ænea* (Pall.); Miller, Bull. Amer. Mus. Nat. Hist. xxxi. p. 304, pls. xxv., xxvi., 1912.

The members of this genus are distinguished by their small size, the wing being less than 150 mm. and the tails more or less graduated.

Key to the Species.

- | | |
|--|-----------------------------|
| A. Under surface for the most part white. | |
| a. Axillaries and under wing-coverts white. | [p. 348. |
| a'. Breast chestnut | <i>C. amazona</i> , ♂, |
| b'. Breast white banded with green | <i>C. amazona</i> , ♀. |
| b. Axillaries and under wing-coverts green intermixed with white. | [p. 348. |
| c'. Throat white; breast chestnut | <i>C. americana</i> , ♂, |
| d'. Throat and breast ochreous buff banded with green | [p. 348. |
| | <i>C. americana</i> , ♀, |
| B. Under surface almost entirely chestnut. | [p. 348. |
| c. Larger, wing more than 70 mm. | |
| e'. Breast uniform with rest of under surface. | <i>C. inda</i> , ♂, p. 349. |
| f'. Breast banded with green, the feathers barred and edged with white | <i>C. inda</i> , ♀, p. 349. |
| d. Smaller, wing less than 70 mm. | |
| g'. Breast like the rest of the under surface ... | <i>C. ænea</i> , ♂, p. 350. |
| h'. Breast crossed by a green band, the feathers barred and fringed with white | <i>C. ænea</i> , ♀, p. 350. |

223. *Chloroceryle amazona*.

GREAT GREEN KINGFISHER.

Alcedo amazona Lath. Ind. Orn. i. p. 257, 1790 (Cayenne); Cab. in Schomb. Reis. Guian. iii. p. 704, 1848.

Ceryle amazona Salvin, Ibis, 1886, p. 60 (Bartica Grove, Camacusa, Merumé Mts.); Quelch, Timehri (2) iv. p. 102, 1890 (Demerara River); Sharpe, Cat. B. Brit. Mus. xvii. p. 129, 1892 (Demerara); Brabourne & Chubb, B. S. Amer. i. p. 95, no. 898, 1912.

Chloroceryle amazona Miller, Bull. Amer. Mus. Nat. Hist. xxxi. p. 308, 1912.

Adult female. General colour above dark glossy green, inner webs of primary-quills notched with white; lateral tail-feathers spotted on the outer web and barred on the inner one with white; collar round hind-neck, hinder cheeks, throat, abdomen, and under tail-coverts pure white; moustachial streak, patch on each side of breast, and streaks on side of body dark glossy green.

Total length 250 mm., culmen 67, wing 132, tail 76, tarsus 13, middle toe and claw 23.

Adult male. Differs from the adult female only in having a broad chestnut band across the breast. Wing 130 mm.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Supenaam River, Mazaruni River (*McConnell collection*); Upper Demerara River (*Quelch*); Bartica, Kamakusa, Merumé Mountains (*Whitely*).

Extralimital Range. South America generally and Central America, including Mexico.

Habits. Schomburgk states (Reis. Guian. iii. p. 704) that the mode of life and habits of this bird are the same as those of *C. torquata*, p. 345. It is especially common in the river-creeks. The "Macusis" call it *Saesuesu* and the "Warraus" *Sohi*.

Mr. J. J. Quelch, who met with this species on the Upper Demerara River (Timehri (2) iv. p. 102), remarks "that it frequents the water-side."

224. *Chloroceryle americana*.

LITTLE GREEN KINGFISHER.

Alcedo americana Gmel. Syst. Nat. i. p. 451, 1788 (Cayenne); Cab. in Schomb. Reis. Guian. iii. p. 704, 1848.

Ceryle americana Salvin, Ibis, 1886, p. 60 (Bartica Grove, Camacusa,

Merumé Mts., Atapurau River, Surnani River); Sharpe, Cat. B. Brit. Mus. xvii. p. 139, 1892 (Demerara River); Brabourne & Chubb, B. S. Amer. i. p. 95, no. 899, 1912.

Chloroceryle americana Miller, Bull. Amer. Mus. Nat. Hist. xxxi. p. 309, 1912.

Adult male. General colour above dark glossy green with white spots and bars on the quills and tail-feathers; cheeks, throat, and lower abdomen white; breast deep chestnut; a band across the abdomen, flanks, and under tail-coverts glossy green barred with white; under wing-coverts green barred and tipped with white.

Total length 170 mm., culmen 39, wing 76, tail 49, tarsus 9.

Adult female. Differs from the adult male in the entire absence of chestnut on the under surface and in having a green band across the chest, bordered on the throat and lower breast by pale ochreous buff. Wing 76 mm.

The birds described were both collected on the Bonasika River in December 1898.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Arawai River, Bonasika River (*McConnell collection*); Bartica, Merumé Mountains, Kamarang River, Surnani River (*Whitely*); Demerara River (*W. Barrow*).

Extralimital Range. Colombia, East Peru, Bolivia, Argentina.

Habits. Schomburgk says (Reis. Guian. iii. p. 704) that the mode of life and habits of this species are the same as those of *C. torquata*, anteà p. 345.

225. *Chloroceryle inda*.

SPOTTED KINGFISHER.

Alcedo inda Linn. Syst. Nat. 12th ed. i. p. 179, 1766 (Cayenne).

Ceryle inda Salvin. Ibis, 1886, p. 69 (Camauesa, Bartica Grove); Sharpe, Cat. B. Brit. Mus. xvii. p. 137, 1892 (Demerara); Brabourne & Chubb, B. S. Amer. i. p. 95, no. 901, 1912.

Alcedo bicolor Cab. in Schomb. Reis. Guian. iii. p. 704, 1848.

Chloroceryle inda Miller, Bull. Amer. Mus. Nat. Hist. xxxi. p. 310, 1912.

Adult male. General colour of the upper surface dark glossy green with minute white spots on the upper wing-coverts which become larger on the scapulars, inner webs of the quills, and inner webs of the tail-feathers—assuming the form of bars on the last;

entire under surface deep chestnut, paler on the throat and sides of the neck; loral streak chestnut. "Bill blackish; feet red."

Total length 233 mm., culmen 47, wing 98, tail 63.

Adult female. Differs from the adult male in having a green band across the chest, the feathers being barred and edged with white. Wing 96 mm.

The male described was collected on the Abary River and the female on the Supenaam River.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Supenaam River, Bartica, Waremia River, Arawai River, Kamakabra River, Abary River, Anarica River (*McConnell collection*); Kamakusa, Bartica (*Whitely*); Demerara (*British Museum*).

Extralimital Range. Eastern Brazil, Peru, Ecuador, and Central America to Nicaragua.

Habits. According to Schomburgk (*Reis. Guian. iii. p. 704*) the mode of life and habits of this bird are the same as those of *C. torquata*, anteà p. 345. The "Macusis" and the "Arekunas" call it *Sakaika*.

226. *Chloroceryle ænea*.

PYGMY KINGFISHER.

Alcedoænea Pall. in Vroeg's Cat. rais. d'Ois. Adumbrat. p. 1, no. 54, 1764 (Surinam).

Alcedo superciliosa Cab. in Schomb. Reis. Guian. iii. p. 704, 1848.

Ceryle superciliosa Salvin. Ibis, 1886, p. 60 (Bartica Grove, Camacusa);

W. L. Selater, Ibis, 1887, p. 318 (Maccasseema, Pomeroon River);

Sharpe, Cat. B. Brit. Mus. xvii. p. 138, 1892 (Demerara River).

Ceryle ænea Brabourne & Chubb, B. S. Amer. i. p. 95, no. 902, 1912.

Chloroceryle ænea Miller, Bull. Amer. Mus. Nat. Hist. xxxi. p. 310, 1912.

Adult male. Upper surface glossy green with white bases to the feathers of the back and scapulars and white spots on the inner webs of the flight-quills and tail-feathers; loral streak and under surface rich chestnut, paler on the throat and under wing-coverts; a patch of green on each side of the breast like the back; middle of abdomen and under tail-coverts white. "Bill black, the basal portion of the lower mandible yellow; feet reddish; eye dark brown."

Total length 126 mm., culmen 26, wing 56, tail 35, tarsus 8.

Adult female. Differs from the adult male in having a green band across the chest, the feathers barred and fringed with white. Wing 56 mm.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Ituribisi River, Supenaam River. Bartica, Bonasika River, Abary River (*McConnell collection*) ; Kamakusa, Bartica (*Whitely*) ; Pomeroon River (*W. L. Sclater*) ; Demerara River (*R. Swain*).

Extralimital Range. Trinidad, Surinam, Cayenne, Brazil, Eastern Peru.

Habits. Schomburgk (*Reis. Guian. iii. p. 704*) states that he found this species more common near the coast about stagnant waters and ditches, but not so common near the rivers. It preys on small fish.

We quote the following note from Mr. Beebe (*Our Search for a Wilderness, p. 16*) :—" A Kingfisher alighted within arm's reach. But such a Kingfisher !—the veriest mite, clad in a robe of brilliant emerald and orange. So small was he that it seemed as if the tiniest of minnows must choke him. He seemed to be of the same opinion, for while we watched him he caught only the insects which passed him in mid-air or which were floating on the water."

Family MOMOTIDÆ.

The members of this family are chiefly green in colour. The bills are rather long and curved, with strong tooth-like serrations on both mandibles. The wings are short in comparison with the length of the tail. The tail-feathers are twelve in number, except in the genus *Baryphthenus* which has ten, and usually long. The feet are small and the toes four in number, three of the latter being directed forward, and the claws are sharply curved.

Their distribution is confined to Central and South America, including the island of Trinidad.

The family consists of seven genera, five of which occur in South America, one genus and one species being represented in British Guiana.

Genus **MOMOTUS** Briss.

Momotus Brisson, Orn. iv. p. 465, 1760. Type *M. momota* (Linn.).

This genus is chiefly distinguished by the long and very graduated tail, the short lateral feathers being about equal to, or exceeded by, the length of the upper tail-coverts; the middle feathers, which are much the longest, have a well-defined racket.

227. **Momotus momota.**

COMMON MOTMOT.

Ramphastos momota Linn. Syst. Nat. 12th ed. i. p. 122, 1766 (Cayenne).

Pionites momota Cab. in Schomb. Reis. Guian. iii. p. 704, 1848.

Momotus brasiliensis Salvin, Ibis, 1886. p. 60 (Bartica Grove, Merumé Mts., Atapurau River, Roraima, 3500 ft.); Quelch, Timehri (2) iv. p. 320, 1890 (Upper Berbice River).

Momotus momota Sharpe, Cat. B. Brit. Mus. xvii. p. 319, 1892 (Demerara);
Brabourne & Chubb, B. S. Amer. i. p. 96, no. 908, 1912.

“Hootoo” (Quelch).

Adult female. General colour above and below green, brighter and more grass-green above, duller below, where the bases of the feathers are rust brown and show through the green surface more or less; outer aspect of bastard-wing, primary-coverts, and quills blue, inner webs of quills for the most part blackish; tail blue towards the apical portion with blackish-brown tips to the feathers; crown of head, lores, and an elongated patch surrounding the eye black; forehead pale blue, as is also a spot joining the eye and the upper margin of the black behind the eye; occipital plumes ultramarine blue, nuchal patch chestnut, a small patch of feathers on the breast black edged with pale blue.

Total length 435 mm., culmen 35, wing 140, tail 255, tarsus 26.

The female described was collected at Bartica.

Adult male. Like the adult female. Wing 145 mm.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Ituribisi River, Supenaam River, Bartica, Kamakabra River, Great Falls, Demerara River, Bonasika River, Mazaruni River (*McConnell collection*); Bartica, Merumé Mountains, Kamarang River, Mount Roraima, 3500 feet (*Whitely*); Berbice River, Coomacka (*Quelch*).

Extralimital Range. North Brazil.

Habits. Mr. J. J. Quelch, who met with the species on the Upper Berbice River, remarks (Timehri (2) iv. p. 320):—"At Coomaeka in the early morning, the oft-repeated cry of the beautiful Hootoo (*Momota brasiliensis*) had been heard close by in the belt of forest on the high land adjoining the savannah, but no attempt had been made to get specimens under the idea that the birds would be met with more advantageously further up: but, as it happened, we had no further chance of procuring them later on."

Family CAPRIMULGIDÆ.

The Goatsuckers—or Nightjars, as they are usually called—are peculiar by their soft and sombre-coloured plumage, as well as by the different forms they display, some having long streamers or spatulate feathers in the wings, while others have similar ornamental plumes in their tails.

The bills are broad, depressed, very wide at the gape, and strongly furnished with rictal bristles. The wings are usually rounded. The tails, which vary in some genera, are, for the most part, square or slightly rounded and the feathers ten in number. The feet are very small, and the claw on the middle toe is usually pectinated.

The family is distributed almost entirely throughout the tropical, subtropical, and temperate regions of the world. Twelve genera and forty-eight species occur in South America, of which ten genera and sixteen species are represented in British Guiana.

Mr. J. J. Quelch gives the following notes on the Caprimulgidæ (Timehri (2) ii. p. 376):—"In the bush here at Whieoon the Goatsuckers (Caprimulgidæ) kept up an apparently ceaseless cry. All through the night whenever I woke the plaintive cries sounded, 'work, work, work to hell,' in a deep guttural tone, while 'whip, whip, whip poor Will' came as a sort of shrill refrain, whether from the same kind of bird but of a different sex, or from a different species it was impossible to tell. Mingled with these was the continual query, 'who are you?' uttered at times so close and loud that it seemed like a rude challenge of one's presence; while again, so low, that it came like a fearful whisper. It was out of the question, under the circumstances, to

find out what species of Goatsucker gave utterance to these cries, but it would be an interesting point to decide."

Mr. Barrington Brown gives the following note (Canoe and Camp Life, p. 244):—"On many of the large clusters of rocks in mid-river were the nests of a small species of Caprimulgidæ called 'Wockariyou.' These can hardly be called nests, for the bird only lays its two small speckled eggs on a hollow in the bare rock, or in a little depression scratched in the gravel upon them. The parent birds do all in their power to entice one away from the nest by fluttering along the ground as if wounded."

Genus **NYCTIBIUS** Vieill.

Nyctibius Vieillot, N. Diet. d'Hist. Nat. xvi. p. 6, 1817. Type *N. jamaicensis* (Gmel.).

The members of this genus are distinguished by their long, thin, and narrow bills with very wide gapes. There are five phalanges to the outer toe, the claws are strong and sharply curved, but there are no pectinations.

Key to the Species.

- A. Smaller, wing less than 290 mm.
 - a. Colour chiefly dark rufous; size small, wing less than 200 mm. *N. bracteatus*, p. 354.
 - b. Colour chiefly grey; size large, wing more than 200 mm. *N. griseus*, p. 355.
- B. Larger, wing more than 290 mm.
 - c. Colour chiefly pale rufous or buff; size small, wing less than 340 mm.... *N. longicaudatus*, p. 353.
 - d. Colour chiefly grey; size large, wing more than 340 mm. *N. grandis*, p. 357.

228. *Nyctibius bracteatus*.

COLOMBIAN GOATSUCKER.

Nyctibius bracteatus Gould, P. Z. S. 1846, p. 1 (Bogota); Salvin, Ibis, 1885, p. 438; Brabourne & Chubb, B. S. Amer. i. p. 97, no. 920, 1912.

Nyctibius rufus Cap. in Schomb. Reis. Guian. iii. p. 711, 1848.

Adult. General colour above and below rufous minutely barred, mottled, or marked with black and white spots to the tips of the

feathers on the sides of the mantle, scapulars, innermost secondaries, abdomen, and under tail-coverts; the innermost secondaries, lower flanks, and under tail-coverts paler and inclining to cinnamon; bastard-wing and primary-coverts black; primary and secondary quills dark brown edged with rufous on the outer webs; tail barred with black, some of the bars broken up into mottlings.

Total length 240 mm., culmen 5, wing 162, tail 128, tarsus 7.

This species is not represented in the McConnell collection, and the description of the bird is taken from a specimen in the British Museum collected at Sarayacu, Ecuador, by C. Buckley—Salvin-Godman collection.

There are no sexed specimens available; we cannot say, therefore, what the sexual differences are.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Caraiben-low, Cumaka (*Schomburgk*)

Extralimital Range. Colombia, Ecuador, Peru.

Habits. Schomburgk states (Reis. Guian. iii. p. 711) that he only met with this species once, and that was in the vicinity of Caraiben-low, Cumaka, in the depth of a thick and damp forest. He did not know anything of its nidification.

229. *Nyctibius griseus*.

GIANT GOATSUCKER.

Caprimulgus griseus Gmel. Syst. Nat. i. p. 1029, 1789 (Cayenne).

Nyctibius jamaicensis Salvin, Ibis, 1885, p. 438 (Bartica Grove, Roraima, 3700 ft.); Hartert, Cat. B. Brit. Mus. xvi. p. 625, 1892.

Nyctibius griseus Brabourne & Chubb, B. S. Amer. i. p. 97, no. 922, 1912.

Adult female (grey phase). General colour above blackish brown everywhere marked with grey or whitish in the form of mottlings or mottled bars and streaks, also a rufous tinge on the upper wing-coverts; under surface chiefly grey with blackish shaft-streaks and black tips to some of the feathers; under wing-coverts blackish dotted with white.

Total length 335 mm., culmen 15, wing 243, tail 167, tarsus 10.

The female described was collected on the Mazaruni River.

It may be remarked that there is a rufous phase to this species

in which the distribution of colours is much the same as in the female described.

The adult male is similar in colour of plumage to the adult female but appears to be larger in size. Wing 260 mm., tail 185.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Bartica, Bonasika River, Makauria River, Abaiy River, Mazaruni River (*McConnell collection*); Bartica, Mount Roraima, 3700 feet (*Whitely*).

Extralimital Range. Trinidad, Colombia, Ecuador, Peru, East Brazil, Paraguay.

Habits. Unrecorded in British Guiana.

230. *Nyctibius longicaudatus*.

LONG-TAILED GOATSUCKER.

Caprimulgus longicaudatus Spix, Av. Bras. ii. p. 1. pl. i., 1825 ("in sylvis fl. Japuræ").

Nyctibius longicaudatus Salvin, Ibis, 1885, p. 437 (Bartica Grove); Hartert, Cat. B. Brit. Mus. xvi. p. 626, 1892; Brabourne & Chubb, B. S. Amer. i. p. 98, no. 923, 1912.

Adult female. General colour above and below pale rufous, the feathers everywhere mottled, freckled, streaked, or barred with black much more broadly on the flight-quills and tail-feathers. "Eyes pale yellow; legs and toes flesh-colour; bill brown; claws brown" (*H. Whitely*).

Total length 400 mm., culmen 15, wing 281, tail 241, tarsus 7.

The *McConnell collection* does not possess a specimen of this species, and the description of the female is taken from an example in the British Museum collected at Bartica by *Whitely* on December 7th, 1880—*Salvin-Godman collection*.

We have not been able to see a male example of this species.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Bartica (*Whitely*).

Extralimital Range. East Peru, Ecuador.

Habits. Unrecorded in British Guiana.

231. *Nyctibius grandis*.

GREAT GOATSUCKER.

Caprimulgus grandis Gmel. Syst. Nat. i. p. 1029, 1789 (Cayenne).
Nyctibius grandis Cab. in Schomb. Reis. Guian. iii. p. 711, 1848;
 Salvin. Ibis, 1885, p. 437 (Camacusa): Hartert. Cat. B. Brit. Mus.
 xvi. p. 628, 1892; Brabourne & Chubb, B. S. Amer. i. p. 98, no. 925,
 1912.

Adult male. General colour above brown, composed of fine frecklings and mottlings of white and rufous brown; bastard-wing, primary-coverts, and quills more uniform blackish brown and more coarsely mottled; tail also more coarsely marked than the back; under surface similar in colour, inclining to more white on the abdomen and under tail-coverts; under wing-coverts blackish dotted with white.

Total length 520 mm., culmen 27, wing 360, tail 230, tarsus 16.

The male from which the description is taken was collected on the Demerara River.

We have not been able to see a female of this species, so that we cannot say what the differences between the sexes are.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Kamakabra River, Demerara River above the Great Falls (*McConnell collection*); Kamakusa (*Whitely*).

Extralimital Range. Venezuela, Colombia, Ecuador, Peru, Brazil.

Habits. Schomburgk states (Reis. Guian. iii. p. 711) that he did not meet with this species but saw a mounted specimen in a collection belonging to Dr. Bonyun, who informed him that it was shot near Georgetown.

Genus **CHORDEILES** Swains.

Chordeiles Swainson, Faun. Bor. Amer. ii. p. 496, 1832. Type *C. virginianus* (Gmel.).

In this genus the bill is extremely small and weak and the rectal bristles are scarcely visible. The wings are long, reaching nearly to the tip of the tail, and pointed. The tail is rather long and slightly emarginate.

232. *Chordeiles acutipennis*..

SOUTH AMERICAN NIGHT-HAWK.

Caprimulgus acutipennis Bodd. Tabl. Pl. Enl. p. 46, 1783 (Guiana).

Chordeiles acutipennis Hartert, Cat. B. Brit. Mus. xvi. p. 614, 1892 (Quonga, Annai); Brabourne & Chubb, B. S. Amer. i. p. 98, no. 928, 1912.

Chordeiles acutipennis acutipennis Oberholser, Bull. U.S. Nat. Mus. 86, p. 94, 1914 (Quonga and Annai, British Guiana).

Adult male. General colour above blackish brown mottled with buffy-white and buff margins to many of the feathers, the light portions assuming the form of spots on the wings; the first, second, third, and fourth primary-quills barred with white, the fifth incompletely barred; a subterminal bar of white on the outer tail-feathers; a large V-shape patch of white on the throat, sides of face black spotted with buff, lower throat black with rufous brown spots, the breast mottled with grey; remainder of under surface ochreous buff barred with brown, including the axillaries, under wing-coverts, and under tail-coverts; edge of wing buffy-white.

Total length 193 mm., culmen 7, wing 170, tail 91, tarsus 14.

The male from which the description is taken was collected on the Ituribisi River.

Adult female. Differs from the adult male chiefly by the absence of the subterminal white bar on the tail. Wing-measurements of two specimens 156 and 165 mm.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Ituribisi River (*McConnell collection*); Annai, Quonga (*Whitely*).

Extralimital Range. Brazil, Peru, Ecuador, Colombia, Venezuela, Tobago.

Habits. Unrecorded in British Guiana.

Genus **NANNOCHORDEILES** Hartert.

Nannochordeiles Hartert, Ibis, 1896, p. 874. Type *N. pusilla* (Gould).

This genus is distinguished by having the first three primaries about equal in length, the scapulars reaching to at least two-thirds the length of the wing, and the tarsus being unfeathered.

233. *Nannochordeiles septentrionalis*.

NORTHERN NIGHT-HAWK.

Nannochordeiles septentrionalis Hellmayr, Nov. Zool. xv. p. 78, 1908 (Maipures, Orinoco); Brabourne & Chubb, B. S. Amer. i. p. 98, no. 932, 1912.

Chordeiles pusillus Hartert, Cat. B. Brit. Mus. xvi. p. 618 part, 1892 (Annai).

Adult male. General colour above dark brown or blackish, spotted, freckled, or mottled with white, grey, buff, or ferruginous; bastard-wing and primary-coverts uniform blackish; primary and secondary quills dark brown with a white bar on the first four outer primaries and white tips to some of the inner primary-quills and secondaries, except the innermost secondaries which are tipped with rufous buff, there are also a few white markings towards the base of the quills; outer tail-feathers with a dark subapical band and a white spot at the tips, chiefly on the inner webs; cheeks and breast brown with buff spots at the tips of the feathers; a broad white band across the throat; abdomen, sides of the body, and under wing-coverts brown narrowly barred with white; under tail-coverts pure white.

Total length 150 mm., culmen 5, wing 128, tail 64, tarsus 11.

Adult female. Like the adult male, but slightly smaller. Wing 122 mm.

This species is not represented in the McConnell collection, and the descriptions are taken from examples in the British Museum collected by Whitely at Annai in March and April 1889—Salvin-Godman collection.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Annai (*Whitely*).

Extralimital Range. North Brazil, Venezuela.

Habits. Unrecorded in British Guiana.

Genus **NYCTIPROGNE** Bonap.

Nyctiprogne Bonaparte, C. S. O. p. 35, 1854. Type *N. leucopyga* (Spix).

This monotypic genus is distinguished by the minute bill, hidden nostrils, and absence of rictal bristles.

234. *Nyctiprogne leucopyga*.

WHITE-RUMPED NIGHT-HAWK.

Caprimulgus leucopygus Spix, Av. Bras. ii. p. 3, pl. iii. fig. 2, 1825 ("ad litora sylvestria fl. Amazonum").

Nyctiprogne leucopyga Hartert, Cat. B. Brit. Mus. xvi. p. 619, 1892; Brabourne & Chubb, B. S. Amer. i. p. 99, no. 933, 1912.

Adult. General colour above blackish brown mottled, freckled, and barred with rufous brown, coarser and more pronounced on the scapulars, wings, and middle tail-feathers; a white band across the outer tail feathers commencing on the inner web of the outer feather; throat and breast similar to the upper surface but more coarsely marked; abdomen, under tail-coverts, and under wing-coverts blackish barred with white.

Total length 168 mm., culmen 6, wing 138, tail 93, tarsus 11.

The bird described was collected on the Abary River in June 1891.

The male and female are said to be similar.

Immature. Differs from the adult in having the primary-quills tipped with rufous.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Abary River (*McConnell collection*).

Extralimital Range. Venezuela, South Brazil.

Habits. Unrecorded in British Guiana.

Genus **PODAGER** Wagl.

Podager Wagler, Isis, 1832, p. 277. Type *P. nacunda* (Vieill.).

This monotypic genus is distinguished by the much broader bill (width at base 37 mm.); the rectal bristles well developed, though not long, are quite conspicuous, the tarsi and toes naked, and the tarsus and middle toe, with claw, almost equal in length. Scapulars and innermost secondaries uniform with the back.

235. *Podager nacunda*.

NACUNDA NIGHT-HAWK.

Caprimulgus nacunda Vieill. N. Dict. d'Hist. Nat. x. p. 240, 1817 (Paraguay).

Podager nacunda Cab. in Schomb. Reis. Guian. iii. p. 711, 1848; Salvin,

Ibis, 1885, p. 438; Hartert, Cat. B. Brit. Mus. xvi. p. 619, 1892 (Aunai); Brabourne & Chubb, B. S. Amer. i. p. 99, no. 934, 1912.

Adult female. General colour of the upper surface blackish brown mottled and freckled with buffy-white, these markings becoming coarser on the tail-feathers and secondary-quills; primary-quills for the most part blackish with white at the base on the inner webs and buff at the base on the outer webs; chin, sides of throat, and breast dark brown barred with buff or buffy-white; a triangular patch of white on the throat; abdomen, under tail-coverts, axillaries, and inner under wing-coverts white narrowly barred with pale brown; outer under wing-coverts narrowly barred with brown and buff.

Total length 248 mm., culmen 12, wing 212, tail 90, tarsus 26.

Adult male. Differs from the adult female in having the lateral rectrices tipped with white and in the absence of the buff on the outer webs at the base of the primary-quills. Wing 214 mm.

The birds from which the descriptions are taken were collected at the Takutu Mountains.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains (*McConnell collection*); Annai (*Whitely*).

Extralimital Range. Tobago, Trinidad, and the remaining portion of South America.

Habits. Unrecorded in British Guiana.

Genus LUROCALIS Cass.

Lurocalis Cassin, Proc. Acad. Nat. Sci. Philadelphia, 1851, p. 189.
Type *L. semitorquatus* (Gmel.).

This genus is distinguished by the narrower bill (width at base 25 mm.), the very short or almost entire absence of rictal bristles, the shorter tail, and in having the scapulars and innermost secondaries for the most part white in strong contrast to the colour of the back.

236. *Lurocalis semitorquatus*.

SEMI-COLLARED NIGHT-HAWK.

Caprimulgus semitorquatus Gmel. Syst. Nat. i. p. 1031, 1789 (Cayenne).*Lurocalis semitorquatus* Salvin, Ibis, 1885, p. 438 (Bartica Grove);

Hartert, Cat. B. Brit. Mus. xvi. p. 621, 1892 (Takutu River);

Brabourne & Chubb, B. S. Amer. i. p. 99, no. 935, 1912.

Adult male. Entire upper surface, sides of face, and breast blackish brown variously marked with buff and white, being coarser on the tail and flight-quills, the white being most conspicuous on the sides of the neck, scapulars, and long innermost secondaries; a broad band of white across the throat; abdomen, under tail-coverts, and under wing-coverts rust-colour barred with dark brown.

Total length 212 mm., culmen 12, wing 212, tail 84, tarsus 14.

Adult female. Similar to the adult male, but slightly smaller. Wing 205 mm.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Great Falls, Demerara River, Supenaam River, Bartica, Abary River (*McConnell collection*); Takutu River, Bartica (*Whitely*).

Extralimital Range. Trinidad, North-west Brazil.

Habits. Unrecorded in British Guiana.

Genus **HYDROPSALIS** Wagl.

Hydropsalis Wagler, Isis, 1832, p. 1222. Type *H. furcifer* (Vieill.).

This genus is characterized by having the outermost and middle pairs of tail-feathers the longest and those next to the central ones the shortest.

237. *Hydropsalis schomburgki*.

(Plate VII.)

Hydropsalis schomburgki Sclater, P. Z. S. 1866, p. 146 (British Guiana); Salvin, Ibis, 1885, p. 439 (Camacusa); Hartert, Cat. B. Brit. Mus. xvi. p. 601, 1892 (British Guiana); Brabourne & Chubb, B. S. Amer. i. p. 100, no. 946, 1912.

Hydropsalis furcifer (nec Vieill.), Cab. in Schomb. Reis. Guian. iii. p. 710, 1848.

Adult male. General colour above blackish brown mottled and mottled with grey, spotted with white and buff on the wings, and fringed with buff and white on the scapulars; the three outer



Hydropsalis schomburgki.
Schomburgk's Night-Hawk.

primary-quills spotted with rufous on both webs, the fourth barred with white; middle tail-feathers heavily marked with grey, the markings on the outer feathers much narrower and inclining to rufous; throat and sides of face buffy-white with dark bars to the feathers; remainder of the under surface brown barred with white or buffy-white, the white increasing in extent on the abdomen and under tail-coverts.

Total length 240 mm., culmen 10, wing 155, tail 134, tarsus 11.

The male described was collected at Bartica.

Adult female. Differs from the adult male in being smaller and darker, with scarcely any white in the plumage. The white bar on the primary-quills in the male is represented by rufous spots in the female. The white on the outer tail-feathers in the male is entirely absent in the tail of the female. Wing 148 mm.

The description of the female is taken from an example in the British Museum collected by Whitely at Kamakusa on the 10th of March, 1882—Salvin-Godman collection.

Breeding-season. Unknown.

Nest. Unrecorded.

Eggs. Undescribed.

Range. Confined to British Guiana: Ituribisi River, Supenaam River, Bartica, Kamakabra River (*McConnell collection*); Kamakusa (*Whitely*).

Habits. Unrecorded.

Genus **NYCTIDROMUS** Gould.

Nyctidromus Gould, *Icones Avium*, ii. pl. 2, 1838. Type *N. albicollis* (Gmel.).

238. *Nyctidromus albicollis*.

WHITE-NECKED NIGHT-HAWK.

Caprimulgus albicollis Gmel. *Syst. Nat.* i. p. 1030, 1789 (Cayenne); Cab. in Schomb. *Reis. Guian.* iii. p. 710, 1848.

Nyctidromus albicollis Salvin, *Ibis*, 1885, p. 439 (Bartica Grove); Hartert, *Cat. B. Brit. Mus.* xvi. p. 587, 1892 (Demerara); Beebe, *Our Search for a Wilderness*, pp. 148, 263, 1910 (Morawhanna, Lower Cuyuni); Brabourne & Chubb, *B. S. Amer.* i. p. 100, no. 948, 1912.

Adult male. General colour above and below rufous brown minutely freckled, mottled, and barred or lined with blackish; wings coarsely spotted with orange-buff and the scapulars broadly margined with the same colour; primary-quills blackish with a white bar on the outer three; middle tail-feathers similar to the

back, outer pair blackish with a little white at the base on the inner web, the next two pairs barred with black and buff at the base, apical portion white with more or less black on the outer webs; head inclining to grey with black shaft-lines; ear-coverts silky orange-buff; a white spot on each side of the throat; under surface paler than above, narrowly barred with dark brown.

Total length 230 mm., culmen 10, wing 141, tail 133, tarsus 21.

Adult female. Much more rufous than the male, the outer primary-quills with a rufous bar instead of white; no white in the tail except on the penultimate feathers, which are slightly tipped. Wing 141 mm.

The descriptions of the male and female are based on examples collected on the Ituribisi River.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Mount Roraima, Ituribisi River, Great Falls, Demerara River, Supenaam River, Bartica, Kana-kabra River, Bonasika River, Abary River (*McConnell collection*); Bartica (*Whitely*); Morawhanna, Lower Cayuni River (*Beebe*).

Extralimital Range. North Brazil, Trinidad, Venezuela, Colombia, Ecuador, and Central America to Mexico.

Habits. According to Schomburgk (*Reis. Guian.* iii, p. 710) this species is very common in British Guiana; one always sees it on the river-borders and open spaces in the woods. After sundown it is very common along the river-borders hunting for insects, during which it continually emits its peculiar wailing note. It was generally in pairs. Its flight is extremely graceful and light; it skims along just above the ground and often settles for a short time in a small hollow in the earth or the rocks. The eggs are two in number. The coloured Indians and the Niggers fear it as a harbinger of bad omens; and that is the reason why they never kill it.

Genus **THERMOCHALCIS** Richm.

Thermochalcis Richmond, Proc. Biol. Soc. Washington, xxviii, p. 179, Nov. 29, 1915. Type *T. cayennensis* (Gmel.).

Stenopsis Cassin, Proc. Acad. Nat. Sci. Philadelphia, 1851, p. 179 (nec *Stenopsis* Rafinesque).

This genus is characterized by having the tail square at the tip or slightly emarginate.

Key to the Species.

- A. Smaller, wing less than 150 mm. *T. cayennensis*, p. 365.
 B. Larger, wing more than 150 mm. *T. ruficervix*, p. 366.

239. *Thermochalcis cayennensis*.

CAYENNE NIGHT-HAWK.

Caprimulgus cayennensis Gmel. Syst. Nat. i. p. 1031, 1789 (Cayenne);
 Cab. in Schomb. Reis. Guian. iii. p. 710, 1848.

Stenopsis cayennensis Salvin, Ibis, 1885, p. 439 (Merumé Mts.,
 Roraima, 3500 to 4000 ft.); Hartert, Cat. B. Brit. Mus. xvi. p. 583,
 1892 (Aunai); Brabourne & Chubb, B. S. Amer. i. p. 101, no. 951,
 1912.

Adult male. Dark brown or blackish above with grey mottlings and vermiculations; scapulars black broadly fringed with white or buff; upper wing-coverts mostly tipped with white; outer primary-quills banded with white, the inner ones spotted with white on the inner webs, the secondaries similar and margined with white at the tips; middle tail-feathers like the back but more coarsely marked, outer feathers for the most part white margined and barred in the middle portion with dark brown; feathers of the crown centred with black and sometimes margined with rufous; a pale rufous collar on the hind-neck; sides of face, throat, abdomen, and under tail-coverts white; sides of throat and breast buff with an admixture of white; under wing-coverts dark brown with more or less white intermixed.

Total length 210 mm., culmen 11, wing 143, tail 114, tarsus 15.

Adult female. Differs from the adult male in being much darker and in the almost entire absence of white in the plumage. The white pattern of the male is replaced by rufous, to some extent, in the female.

Total length 200 mm., culmen 11, wing 156, tail 107, tarsus 14.

The birds from which the descriptions are taken were collected on the Ituribisi River.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Mount Roraima, Ituribisi River (McConnell collection); Mount Roraima, Merumé Mountains, Annai (*H. Whitely*).

Extralimital Range. North Brazil, Venezuela, Colombia.

Habits. Schomburgk states (Reis. Guian. iii. p. 710) that he

found this bird fairly common in low bush near the banks of the rivers in virgin forest. It only flew for a short distance before settling again. The "Macusis" call it *Tiwima*.

240. *Thermochalcis ruficervix*.

RUFIOUS-NAPED NIGHT-HAWK.

Stenopsis ruficervix Scater, P. Z. S. 1866, p. 140, pl. xiv. (Interior of New Granada); Salvin, Ibis, 1885, p. 439 (Roraima, 5000 ft.); Hartert, Cat. B. Brit. Mus. xvi. p. 584, 1892; Brabourne & Chubb, B. S. Amer. i. p. 101, no. 955, 1912.

Caprimulgus decussatus (nec Tsch.), Cab. in Schomb. Reis. Guian. iii. p. 710, 1848.

Adult male. General colour above black with ferruginous, grey, or white spots and mottlings to the feathers; a ferruginous collar on the hind-neck; bastard-wing and primary-coverts blackish with ferruginous spots on the outer webs; primary-quills dark brown with an incomplete white bar on the first, second, and third feathers and an indication of a white spot on the fourth, the remainder of the primaries with small rufous spots on both webs; the secondary-quills dark brown incompletely barred with rufous on the outer webs and buff on the inner ones; middle tail-feathers dark brown with mottled-grey bars, the outer feathers paler brown, the outer webs barred with rufous, with a small white spot towards the base and a large one at the tip on the inner webs, the outer webs mottled with rufous at the tips; sides of the face and chin like the back; a white patch across the throat; fore-neck blackish brown with ferruginous tips to the feathers; breast and sides of the body dark brown barred and tipped with white which fades into buff on the abdomen and under tail-coverts; under wing-coverts similar to the fore-neck.

Total length 240 mm., culmen 16, wing 176, tail 119, tarsus 16.

Adult female. Differs from the adult male only in the absence of the white bar on the first three primary-quills, which is represented in the female by a rufous spot on the outer web only of the three outer primary-quills, and in the almost entire absence of white in the tail. Wing 164 mm.

This species is not represented in the McConnell collection, and the descriptions of the male and female are taken from specimens in the British Museum collected by Whitely at Mount Roraima, 5000 ft., on the 23rd of August, 1883—Salvin-Godman collection.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Mount Roraima, 5000 ft. (*Whitely*).

Extralimital Range. Venezuela, Colombia, Ecuador, Peru.

Habits. Schomburgk states (*Reis. Guian.* iii. p. 710) that he found this species on the Roraima Mountains up to an altitude of 5000 ft. Its mode of life and habits are the same as those of other Nightjars; its favourite haunts are low bush, fissures in the rocks, and amongst boulders.

Genus **CAPRIMULGUS** Linn.

Caprimulgus Linné, *Syst. Nat.* 10th ed. i. p. 193, 1758. Type *C. europæus* Linn.

This genus is distinguished chiefly by the absence of any ornamental plumes in the wings or tail, the wings being usually pointed in shape and the tail generally rounded at the tip; the pale markings on the head are almost always longitudinal.

Key to the Species.

- A. Throat and superciliary streak rufescent buff; a rufous collar on the hind-neck... *C. maculicaudus*, p. 367.
- B. Throat-patch white, no buff superciliary streak, and no collar on the hind-neck.
 - a. First and second primary-quills crossed by a white bar, remainder of primaries uniform; under tail-coverts buff..... *C. whitelyi*, p. 368.
 - b. First primary uniform dark brown, the second and third have a white spot on the inner web, and fourth a white spot on both webs; under tail-coverts dark brown narrowly barred with buff *C. nigrescens*, p. 369.

241. *Caprimulgus maculicaudus*.

Stenopsis maculicaudus Lawr. *Ann. Lyc. New York*, vii. p. 459, 1862 (Pará).

Caprimulgus maculicaudus Brabourne & Chubb, *B. S. Amer.* i. p. 101, no. 960, 1912.

Adult female. Crown of head black minutely dotted with buff; back, wings, and tail dark brown mottled, spotted, and barred with rufous or buffy-white; scapulars black, outer margins buffy-white; a rufous collar on the hind-neck; superciliary line buffy-white barred or dotted with black; throat rufous with black bases to the feathers; under wing-coverts similar; breast barred or

spotted with black, rufous, and white; abdomen and under tail-coverts rufescent buff.

Total length 178 mm., culmen 8, wing 127, tail 84, tarsus 26.

Adult male. Similar to the adult female, but differs in having white spots on the inner webs of the outer tail-feathers.

The female from which the description is taken was collected at the Takutu Mountains.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains (*McConnell collection*).

Extralimital Range. Brazil, Peru, Colombia.

Habits. Unrecorded in British Guiana.

242. *Caprimulgus whitelyi*.

WHITELY'S NIGHT-HAWK.

Antrastomus whitelyi Salvin. Ibis, 1885, p. 438 (Roraima, 3500 ft.).

Caprimulgus whitelyi Hartert, Cat. B. Brit. Mus. xvi. p. 573, pl. xii. 1892; Brabourne & Chubb, B. S. Amer. i. p. 102, no. 963, 1912.

Adult male. General colour of the upper parts blackish brown, the feathers spotted, freckled, or mottled with white, grey, or ferruginous; bastard-wing and primary-coverts uniform dark brown; primary and secondary quills uniform blackish brown except the two outer primaries, which are crossed by a white bar, and the innermost secondaries, which are notched on the inner webs with ferruginous buff and more or less freckled with grey; tail dark brown, the feathers mottled with grey and barred with buff, the two penultimate feathers have a large white sub-apical spot on the inner webs; a patch of white on the throat, some of the feathers tipped with buff; remainder of the under surface dark brown, the feathers tipped with buff, or white including the under wing-coverts, the buff increasing in extent on the abdomen, where it assumes the form of bars; under tail-coverts and some of the inner under wing-coverts almost uniform buff.

Total length 210 mm., culmen 10, wing 157, tail 103, tarsus 12.

Adult female. Very similar to the adult male, differing only in the absence of the white bar on the two outer primary-quills, which is represented by an incomplete narrow rufous bar on the second and third primary-quills, and the white spots on the tail-feathers only faintly indicated on one feather instead of two. Wing 157 mm.

Breeding-season. Unknown.

Nest. Unrecorded.

Eggs. Undescribed.

Range. Confined to British Guiana : Mount Roraima, 3500 ft. (Whitely).

Habits. Unrecorded.

243. *Caprimulgus nigrescens*.

DARK NIGHT-HAWK.

Caprimulgus nigrescens Cab. in Schomb. Reis. Guian. iii. p. 710, 1848 (British Guiana); Hartert, Cat. B. Brit. Mus. xvi. p. 572, 1892 (Retreat River); Brabourne & Chubb, B. S. Amer. i. p. 102, no. 964, 1912.

Antrostomus nigrescens Salvin, Ibis, 1885, p. 438 (Bartica Grove, Camacusa).

Adult female. Upper and under surface blackish with rufous or whitish spots and mottlings on the sides of the crown, upper wing-coverts, back, and short scapulars; long scapulars mottled with whitish; tail banded with mottled grey, which becomes almost obsolete on the outer feathers; primary and secondary flight-quills uniform blackish brown; throat and breast similar to the upper surface with a white band across the former; abdomen and under tail-coverts narrowly barred with buff; under wing-coverts and lower aspect of quills uniform sooty-brown.

Total length 170 mm., culmen 8, wing 136, tail 88, tarsus 13.

The female from which the description is taken was collected at Bartica.

Adult male. Similar to the adult female, but differs in having a white spot on the inner web of the third and fourth primary-quills and white tips to the two penultimate tail-feathers. Wing 150 mm.

The male described was collected on the Warema River.

The young is chestnut-brown above, mottled with black and more or less with white on the scapulars and sides of the crown. The under surface is everywhere barred with buffy-white.

Breeding-season. Unknown in British Guiana.

Nest. A shallow hollow in the ground under low bushes (Schomburgk).

Eggs. The eggs are two in number (Schomburgk).

Range in British Guiana. Mount Roraima, Ituribisi River, Supenaam River, Bartica, Kamakabra River, Bonasika River,

Arweye River, Tiger Creek, Great Falls Demerara River, Arawai River, Warema River (*McConnell collection*) ; Bartica, Kamakusa (*Whitely*) ; Retreat River (*British Museum*).

Extralimital Range. North Brazil, Peru, Ecuador, Colombia.

Habits. Schomburgk states (*Reis. Guian.* iii. p. 753) that he found this new species fairly common near the Lower Essequibo River, where it was generally found in pairs perched on the rocks rising from the river. It allowed a very close approach before rising, and only flew a short distance before settling again. The nest is a shallow hollow in the ground under low bushes, and the eggs are two in number.

Family MICROPODIDÆ.

The Swifts are birds of small size, and the majority of dark colour. The bill is very short, curved at the tip, broad at the base, and very wide at the gape. No rictal bristles. The wings are long and pointed. The tail is composed of ten feathers. The feet are very small.

They are distributed over the greater part of the known world. Five genera and twenty-four species occur in South America, of which four genera and eight species are represented in British Guiana.

Genus CHÆTURA Steph.

Chætura Stephens, in Shaw's Gen. Zool. xiii, pt. 2, p. 76, 1826. Type *C. pelagica* (Linn.).

The chief characters by which this genus is distinguished are the spines at the tips of the tail-feathers, the hind-toe directed backwards, and the plumage particoloured.

Key to the Species.

- | | |
|--|--------------------------------|
| A. Larger, wing more than 130 mm. ; a white collar which encircles the neck | <i>C. albicincta</i> , p. 371. |
| B. Smaller, wing less than 130 mm. ; no white collar encircling the neck. | |
| <i>a.</i> Under surface black ; lower back and rump smoke-grey | <i>C. brachyura</i> , p. 371. |
| <i>b.</i> Under surface smoke-brown ; lower back black with a white band across the rump | <i>C. spinicauda</i> , p. 372. |
| <i>c.</i> Under surface hoary grey like the lower back and rump | <i>C. guianensis</i> , p. 373. |

244. *Chætura albicincta*.

WHITE-BANDED SWIFT.

Hemiprocne albicincta Cab. J. f. O. 1862, p. 165 (Guiana); Salvin, Ibis, 1885, p. 437.

Acanthylis collaris Cab. in Schomb. Reis. Guian. iii. p. 709, 1848; Brown, Canoe and Camp Life, p. 219, 1876 (Kaieteur Falls).

Chætura zonaris (nec Shaw), Salvin, Ibis, 1885, p. 436 (Roraima, 3500 ft.).

Chætura albicincta Hartert, Cat. B. Brit. Mus. xvi. p. 478, 1892 (Roraima); Brabourne & Chubb, B. S. Amer. i. p. 102, no. 969, 1912.

“Noroquah” (*Brown*).

Adult male. Glossy black above and below, somewhat paler on the fore-neck, especially on the throat, with a white band round the hind-neck which meets on the lower throat.

Total length 205 mm., culmen 9, wing 190, tail 72, tarsus 22.

The male from which the description is taken was collected at the Kanuku Mountains on November 12, 1900, by Mr. J. J. Quelch.

We are unable to say whether the female differs from the male in plumage or measurement, as we find that the two specimens mentioned in the ‘Catalogue of Birds’ from Roraima marked ♂ ♀ are both males, and we do not know of any others that are available.

Breeding-season. Unknown.

Nest. Unrecorded.

Eggs. Undescribed.

Range. Confined to British Guiana: Kanuku Mountains, Nov. 1900, Kurubung River (*McConnell collection*); Mount Roraima, 3500 ft. (*Whitely*).

Habits. Mr. Barrington Brown writes (Canoe and Camp Life, p. 219):—“These birds, called *Noroquah* by the ‘Macusis,’ belong to the Hirundinidæ. They are of a blackish colour, with a white ring round the neck, widening into a patch under the throat.”

245. *Chætura brachyura*.

SHORT-TAILED SWIFT.

Acanthylis brachyura Jard. Ann. Mag. Nat. Hist. xviii. p. 120, 1846 (Tobago).

Chætura poliura (nec Temm.), Hartert, Cat. B. Brit. Mus. xvi. p. 484, 1892 (Aunai).

Chætura brachyura Brabourne & Chubb, B. S. Amer. i. p. 102, no. 971, 1912.

Adult male. Head, upper back and wings, breast and abdomen, glossy black; lower back, rump, upper and under tail-coverts ash-grey, tail somewhat darker with spine-like shafts which protrude beyond the webs.

Total length 95 mm., culmen 5, wing 116, tail 29, tarsus 10.

The male from which the description is taken was collected on the Abary River in November 1906.

Adult female. Similar to the adult male, but rather larger. Wing 122 mm.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Abary River (*McConnell collection*): Annai (*Whitely*).

Extralimital Range. Tobago, Trinidad, North Brazil, Venezuela, East Peru.

Habits. Unrecorded in British Guiana.

246. *Chætura spinicauda*.

SPINE-TAILED SWIFT.

Acanthylis spinicauda Boie, Isis, 1826, p. 971 (Cayenne).

Chætura spinicauda Salvin, Ibis, 1885, p. 437 (Bartica Grove, Camacusa); Quelch, Timehri (2) v. p. 101, 1891; Hartert, Cat. B. Brit. Mus. xvi. p. 483, 1892; Beebe, Our Search for a Wilderness, pp. 289, 292, 1910 (Aremu River); Brabourne & Chubb, B. S. Amer. i. p. 103, no. 975, 1912.

"Spiny-tailed Swift" (*Quelch*).

Adult male. Head, back, wings, and tail glossy black; sides of neck, breast, and abdomen sooty-brown, darker on the under tail-coverts and wing-coverts; throat and rump ashy-white.

Total length 114 mm., culmen 3, wing 101, tail 39, tarsus 10.

We do not know the exact locality, in the Colony, of the male from which the description is taken.

Adult female. Like the adult male, but rather larger. Wing 106 mm.

The description of the female is taken from a specimen in the British Museum collected by Whitely at Kamakusa in October 1881—Salvin-Godman collection.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Bartica, Kamakusa (*Whitely*).

Extralimital Range. Trinidad, Venezuela, East and Central Brazil.

Habits. Mr. Quelch observed this species in Georgetown, and remarks (Timehri (2) v. p. 101, 1891):—"The Swifts are represented by one species (*Chætura spinicauda*), which is commonly mistaken for one of the Swallows, whose external appearance they closely resemble, while their habits are identical. In structure, however, such as in the arrangement both of the feather-tracts on the body and of the muscles of the toes and wings, in their unnotched sternum or breast-bone, and in their 10-quilled tails, they agree with the Humming-birds, while the Swallows are exactly like the ordinary passerine birds.

"In the Spiny-tailed Swift the wings are very long, the total length of the bird from the tip of the bill to the end of the wings being about 6 inches. The colour is of a prevailing bronze-black above and below, the rump, throat, and spiny tail being paler. I have never seen these birds about the houses in the city; but when seen in the sky, they will be distinguished by their long narrow wings, and their proportionately more rapid, bat-like flight."

247. *Chætura guianensis*.

GUIANA SWIFT.

Chætura guianensis Hartert, Cat. B. Brit. Mus. xvi. p. 486, 1892 (British Guiana); Brabourne & Chubb, B. S. Amer. i. p. 103, no. 980, 1912.

Chætura cinereiventris (nec Schl.), Salvin, Ibis, 1885, p. 437 (Merumé Mts., Atapurau River, Roraima, 3500 ft.).

Adult male. Head, hind-neck, upper back, wings, and tail glossy bluish black; rump, upper tail-coverts, throat, breast, and abdomen hoary-grey, paler on the chin and upper throat and darker on the vent; under tail-coverts dark bottle-green; under wing-coverts blackish.

Total length 106 mm., culmen 4, wing 101, tail 40, tarsus 12.

Adult female. Similar to the adult male. Total length 109 mm., culmen 4, wing 106, tail 41, tarsus 13.

The male described is in the British Museum, and was collected by Whitely at Mount Roraima, 3500 ft., on April 11th, 1883, and the female on the Kamarang River, January 25th, 1882—Salvin-Godman collection.

Breeding-season. Unknown.

Nest. Unrecorded.

Eggs. Undescribed.

Range. Confined to British Guiana: Kamarang River, Mount Roraima, Merumé Mountains (*Whitely*).

Habits. Unrecorded.

Genus **CYPSELOIDES** Streub.

Cypseloides Streubel, Isis, 1848, p. 366. Type *C. fumigatus* Streub.

In this genus the tail is scarcely stiffened, the shafts of the feathers only very slightly spined, and the plumage is almost uniform.

- A. Throat and collar on the hind-neck bright rufous in contrast with the rest of the plumage, which is black *C. rutilus*, p. 374.
- B. Throat and entire hind-neck black like the rest of the plumage *C. nigra*, p. 375.

248. *Cypseloides rutilus*.

SHINING SWIFT.

Hirundo rutila Vieill. N. Dict. d'Hist. Nat. xiv. p. 528, 1817 (Guiana).

Chætura rutila Salvin, Ibis, 1885, p. 437 (Merumé Mts.).

Cypseloides rutilus Hartert, Cat. B. Brit. Mus. xvi. p. 493, 1892; Brabourne & Chubb, B. S. Amer. i. p. 103, no. 982, 1912.

Adult male. Crown of head, entire back, wings, and tail black, as are also the abdomen, under tail-coverts, and under wing-coverts; throat, fore-neck, sides of face, and a collar on the hind-neck bright rufous.

Total length 132 mm., culmen 5, wing 135, tail 58, tarsus 13.

This species is not represented in the McConnell collection, and the description of the male is taken from the single specimen in the British Museum which was collected by Whitely at the Merumé Mountains on the 27th of July, 1881—Salvin-Godman collection.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Merumé Mountains (*Whitely*).

Extralimital Range. Trinidad.

Habits. Unrecorded in British Guiana.

249. *Cypseloides nigra*.

BLACK SWIFT.

Hirundo nigra Gmel. Syst. Nat. i. p. 1025, 1789 (Cayenne).

Cypseloides niger Hartert, Cat. B. Brit. Mus. xvi. p. 494, 1892 (Merumé Mts.).

Cypseloides nigra Brabourne & Chubb, B. S. Amer. i. p. 104, no. 984, 1912.

Adult male. General colour above and below black, the crown of the head somewhat paler than the back, sides of the face and throat paler than the top of the head, the shaft-lines darker and contrasting with the rest of the feather; remainder of the under surface sooty-black.

Total length 146 mm., culmen 6, wing 151, tail 58, tarsus 11.

This species is not represented in the McConnell collection, and the description is taken from a specimen in the British Museum collected by Whitely at the Merumé Mountains on the 13th of June, 1881—Salvin-Godman collection.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Merumé Mountains (*Whitely*).

Extralimital Range. West India Islands.

Habits. Unrecorded in British Guiana.

Genus **REINARDA** Hartert.

Reinarda Hartert, Bull. Brit. Orn. Cl. vol. xxxvi. No. cex. p. 7, Nov. 1915. Type *R. squamata* (Cass.).

Claudia Hartert, Cat. B. Brit. Mus. xvi. p. 469, 1892 (nec *Claudia* Stål).

The chief characters of this genus are the hind-toe directed forwards, the toes in pairs, and the toes feathered.

250. *Reinarda squamata*.

FORKED-TAILED PALM-SWIFT.

Cypselus squamatus Cass. Proc. Acad. Nat. Sci. Philad. 1853, p. 369 (British Guiana).

Claudia squamata Hartert, Cat. B. Brit. Mus. xvi. p. 469, 1892 (Aunai); Brabourne & Chubb, B. S. Amer. i. p. 104, no. 987, 1912.

Adult male. Head, back, wings, tail, sides of body, and under wing-coverts dark brown with a steel-green gloss and pale margins to the feathers; throat, breast, and middle of abdomen silky white.

Total length 110 mm., culmen 3, wing 95, tail 55, tarsus 9.

The male described was collected at the Takutu Mountains in 1909.

Adult female. Similar to the adult male, but somewhat larger. Wing 112 mm.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains (*McConnell collection*); Annai (*Whitely*).

Extralimital Range. Surinam (*Bartlett*), Northern Brazil, East Peru.

Habits. Unrecorded in British Guiana.

Genus **PANYPTILA** Cab.

Panyptila Cabanis, Archiv für Naturg. xiii. p. 345, 1847. Type *P. cayennensis* (Gmel.).

This monotypic genus is distinguished by having all the toes directed forward and feathered, but not paired, and the tail deeply forked.

251. *Panyptila cayennensis*.

CAYENNE SWIFT.

Hirundo cayennensis Gmel. Syst. Nat. i. p. 1024, 1789 (Cayenne).

Panyptila cayennensis Salvin, Ibis, 1885, p. 436 (Merumé Mts.); Hartert, Cat. B. Brit. Mus. xvi. p. 461, 1892; Beebe, Our Search for a Wilderness, pp. 143, 176, 1910 (Morawhanna, Hoorie); Brabourne & Chubb, B. S. Amer. i. p. 104, no. 988, 1912.

Adult female. General colour above and below velvety-black; secondary and inner primary-quills edged with whitish; throat,

a spot in front of each eye, a collar on the hind-neck, and a spot on the lower flanks white.

Total length 124 mm., culmen 6, wing 115, tail 55, tarsus 7.

Adult male. Similar to the adult female, but rather larger. Wing 125 mm.

This species is not represented in the McConnell collection, and the descriptions are taken from specimens in the British Museum. The female was collected by Whitely at the Merumé Mountains on the 15th of June, 1881, and the male by J. Hauxwell at Samiria, East Peru, on the 11th of November, 1881—Salvin-Godman collection.

Breeding-season. Unrecorded in British Guiana.

Nest. Cf. Beebe, *infra*.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Merumé Mountains (*Whitely*); Morawhanna, Hoorie River (*Beebe*).

Extralimital Range. Colombia, Brazil.

Habits. We quote the following note from Mr. Beebe (Our Search for a Wilderness, p. 143).—"A beautiful pendent nest of the Feather-toed Swift composed entirely of feathery plumes. It was a straight symmetrical column about three inches in diameter and fourteen inches long, suspended from the palm thatch, not half a foot from a hanging, open-comb wasps' nest, This Swift was common on all the Guiana rivers, hawking with Swallows over the water. Seen on the wing it appears glossy black with a white throat and collar."

Suborder TROCHILI.

Family TROCHILIDÆ.

The Humming-birds are peculiar by their small size, their very bright metallic plumage, and the many varied forms of their bills and tails.

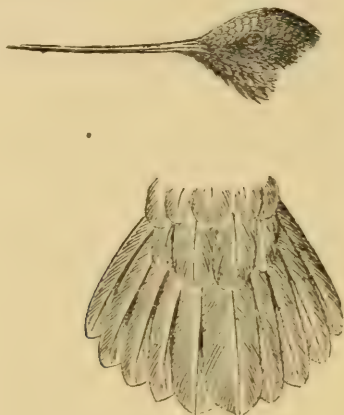
Their distribution is confined to the countries of North, Central, and South America, the West India Islands and other islands adjacent to the mainland.

There are one hundred genera and about four hundred and sixty species in South America, twenty-six genera and thirty-nine species being represented in British Guiana.

Genus **DORYFERA** Gould.

Doryfera Gould, P. Z. S. 1847, p. 95. Type *D. ludoviciæ* (Bourc. & Muls.).

This genus is distinguished by the somewhat long and slender bill, which is slightly upturned, with no terminal hook and the serrations almost obsolete. The tail is short and rounded.



Doryfera johannæ.

Fig. 66.—To show the form of the bill and the shape of the tail.

252. *Doryfera johannæ*.

BLUE-FRONTED LANCE-BILL.

Trochilus johannæ Bourc. P. Z. S. 1847, p. 45 (Peru).

Hemistephania johannæ Salvin, Ibis, 1885, p. 433 (Merumé Mts., Roraima); id. Cat. B. Brit. Mus. xvi. p. 40, 1892; Brabourne & Chubb, B. S. Amer. i. p. 105, no. 992, 1912.

Adult male. Fore part of head glistening violet edged posteriorly with green; hinder crown and nape deep coppery bronze; back and upper wing-coverts bronze-green, becoming bluish green on the rump and short upper tail-coverts; long upper tail-coverts and tips of tail-feathers blue; under surface blackish glossed with very dark green on the throat, dark bronze on the sides of the neck and sides of the body, and steel-blue on the under tail-coverts.

Total length 93 mm., culmen 28, wing 53, tail 27.

The description of the male is based on an example collected by Mr. McConnell at Mount Roraima in October 1898.

Adult female. Differs from the adult male in being coppery bronze on the upper surface, grey below with a tinge of green, and the forehead glistening green. Wing 48 mm.

The description of the female is taken from an example in the British Museum collected by Whitely at the Merumé Mountains on the 13th of July, 1881—Salvin-Godman collection.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Mount Roraima (*McConnell collection*); Merumé Mountains, Mount Roraima (*Whitely*).

Extralimital Range. Peru, Ecuador, Colombia.

Habits. Unrecorded in British Guiana.

This species was originally described from Peru, and was first collected in British Guiana by the late Henry Whitely at Mount Roraima and the Merumé Mountains, and recorded by Salvin, *Ibis*, 1885, p. 433.

Genus **THRENETES** Gould.

Threnetes Gould, Monogr. Troch. i. pl. 13, October 1852. Type *T. leucurus* (Linn.).

In this genus the bill is slightly arched, the nasal covers are feathered, the tail is rounded, and the feathers are pointed.



Threnetes leucurus.

Fig. 67.—To illustrate the slightly arched bill and pointed tail-feathers.

253. *Threnetes leucurus*.

WHITE-TAILED BARBED-THROAT.

Trochilus leucurus Linn. Syst. Nat. 12th ed. i. p. 190, 1766 (Surinam).
Threnetes leucurus Gould, Monogr. Troch. i. pl. 13, 1852 (Demerara);
 Salvin, Cat. B. Brit. Mus. xvi. p. 264, 1892 (Demerara); Brabourne
 & Chubb, B. S. Amer. i. p. 105, no. 998, 1912.

Adult. Head, back, upper wing-coverts, and central tail-feathers dull green with pale edgings to the feathers; flight-quills brown minutely edged with white at the tips; outer tail-feathers more or less white; chin and sides of face blackish; throat pale rufous, rather duller on the cheeks; breast dusky, with a wash of green which is increased on the sides of the neck; abdomen dirty white; under tail-coverts green with pale margins to the feathers.

Total length 111 mm., culmen 26, wing 61, tail 136.

The bird from which the description is taken was collected on the Ituribisi River.

There are no sexed birds of this species in the McConnell collection nor in the series at the British Museum. We can only suggest, therefore, that the male and female are probably alike in plumage.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Bonasika River, Lower Mazaruni River (*McConnell collection*); Demerara (*Gould collection in the British Museum*).

Extralimital Range. Surinam (*Linné*), North Brazil.

Habits. Unrecorded in British Guiana.

Genus **GLAUCIS** Boie.

Glaucis Boie, Isis, 1831, p. 545. Type *G. hirsuta* (Gmel.).

This genus is distinguished by the arched bill and rounded tail, the feathers being somewhat pointed.

254. *Glaucis hirsuta*.

HAIRY HERMIT.

Trochilus hirsutus Gmel. Syst. Nat. i. p. 490, 1788 (Brazil).

Trochilus braziliensis Cab. in Schomb. Reis. Guian. iii. p. 708, 1848.

Trochilus dominicus (nec Linn.), Cab. tom. cit. p. 708.

Glaucis hirsuta Salvin, Ibis, 1885, p. 431 (Roraima, 3500 ft.); id. Cat. B. Brit. Mus. xvi. p. 41, 1892; Brabourne & Chubb, B. S. Amer. i. p. 106, no. 1001, 1912.

Adult male. General colour of the upper surface bronze-green, darker and more dusky on the head and more green on the upper tail-coverts and central tail-feathers; outer tail-feathers chestnut at the base, subapically brown, and the entire tail tipped with white;



Glaucis hirsuta.

Fig. 68.—To show the arched bill and rounded tail.

flight-quills brown with pale edges at the tips; throat dusky, remainder of the under surface dull rufous, paler on the middle of the abdomen.

Total length 109 mm., culmen 33, wing 58, tail 33.

We do not know the exact locality, in the Colony, of the male from which the description is taken.

Adult female. Differs from the adult male in being more bronzy above and in having the under surface entirely rufous. Wing 55 mm. "Bill, upper mandible black, lower mandible pale yellow tipped with black; legs and toes yellowish flesh-colour; eye black; claws black" (*H. Whitely*).

The description of the female is taken from a specimen in the British Museum collected by Whitely at Mount Roraima on the 27th of December, 1881—Salvin-Godman collection.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Bartica, Anarica River, Warema River (*McConnell collection*).

Extralimital Range. Brazil, Eastern Peru, Colombia, Venezuela, Trinidad.

Habits. According to Schomburgk (*Reis. Guian. iii. p. 708*) this bird is found plentifully on the outskirts of the woods.

Genus **PHAËTHORNIS** Swains.

Phaëthornis Swainson, *Zool. Journ. iii. p. 357, 1827.* Type *P. superciliosus* (Linn.).

This genus is characterized by the somewhat long and wedge-shaped tail and the curved bill.



Phaëthornis longuemareus.

Fig. 69.—To show the wedge-shaped tail and the curved bill.

Key to the Species.

A. Larger, wing more than 50 mm.

a. Outer tail-feathers tipped with white.

a'. Under surface rufescent buff *P. superciliosus*, p. 383.

b'. Under surface grey *P. augusti*, p. 384.

b. Outer tail-feathers tipped with buff *P. bourcierii*, p. 385.

B. Smaller, wing less than 50 mm.

- c. Under surface grey *P. rufurumii*, p. 385.
 d. Under surface rufous.
 c'. Chin black; no dark band on the
 breast *P. longumareus*, p. 386.
 d'. Chin rufous; a dark band across the
 breast.
 a''. Under aspect of outer tail-feathers
 subterminally bronze *P. ruber*, p. 387.
 b''. Under aspect of outer tail-feathers
 subterminally black..... *P. episcopus*, p. 388,

255. *Phaëthornis superciliosus*.

CAYENNE HERMIT.

Trochilus superciliosus Linn. Syst. Nat. 12th ed. i. p. 189, 1766 (Cayenne); Cab. in Schomb. Reis. Guian. iii. p. 708, 1848.

Phaëthornis superciliosus Salvin, Ibis, 1885, p. 431 (Bartica Grove, Camacusa, Merumé Mts., Atapurau River); id. Cat. B. Brit. Mus. xvi. p. 270, 1892 (Quonga); Brabourne & Chubb, B. S. Amer. i. p. 106, no. 1008, 1912.

Phaëthornis guianensis Beebe, Our Search for a Wilderness, p. 307, 1910 (Aremu).

Adult male. General colour above bronze-brown, with buff edges to the feathers on the lower back, ramp, and upper tail-coverts; tail green at base, subapically blackish and tipped with white; flight-quills brown; eye-brow buff; ear-coverts dark brown; cheeks greyish; under surface greyish buff, becoming more rufous on the abdomen; under tail-coverts inclining to white.

Total length 158 mm., culmen 37, wing 60, tail 70.

The description of the male is taken from an example collected on the Makauria River.

Adult female. Similar to the adult male, but rather smaller in size. Wing 56 mm.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Bonasika River, Makauria River, Anarica River, Mazaruni River (*McConnell collection*); Bartica, Merumé Mountains, Kamakusa, Kamarang River, Quonga, Annai (*Whitely*).

Extralimital Range. Venezuela and North-west Brazil.

Habits. Schomburgk states (Reis. Guian. iii. p. 708) that he

found this species common only in open places, and on the outskirts of woods, where it frequents the flowering Musaceæ. It produces a peculiar humming noise with its wings when flying, when it also utters its call. He did not find its nest, although it was fairly common.

Mr. J. J. Quelch, who observed this bird in Georgetown, remarks (Timehri (2) v. p. 98) :—" This species may be obtained in or around the town, though it is only seen at rare intervals about the trees and the flowering plants on the outskirts of the city."

Mr. Beebe gives the following note (Our Search for a Wilderness, p. 307) :—" The Rufous-breasted Humming-birds are abundant here, and have quite a sweet song, a trill of twelve or fifteen notes, slow at first but rapidly increasing and ascending."

256. *Phaethornis augusti*.

SALLE'S HERMIT.

Trochilus augusti Bourc. Ann. Soc. Agric. Lyon, x. p. 623, 1847 (Caracas).

Phaethornis augusti Salvin, Ibis, 1885, p. 431 (Roraima); id. Cat. B. Brit. Mus. xvi. p. 277, 1892 (Quonga); Brabourne & Chubb, B. S. Amer. i. p. 108, no. 1025, 1912.

Adult male. Upper surface bronze-green, somewhat darker on the crown of the head, and with rufous edges to the upper tail-coverts; flight-quills uniform brown; tail-feathers blackish at base with white tips, the central ones bronze-green like the back; superciliary stripe white; a dark line below the eye which extends over the ear-coverts; a white line along the cheeks below the ear-coverts; under surface ash-grey, somewhat paler on the throat and middle of the abdomen.

Total length 147 mm., culmen 33, wing 60, tail 70.

The male described was collected by Mr. McConnell at Mount Roraima in October 1898.

Adult female. Differs from the adult male in being slightly smaller and paler grey on the under surface. Wing 57 mm.

The description of the female is taken from a specimen in the British Museum collected by Whitely at Mount Roraima (3500 ft. alt.) on January 9th, 1884—Salvin-Godman collection.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Mount Roraima (*McConnell collection*); Quonga, Mount Roraima (*Whitely*).

Extralimital Range. Colombia, Venezuela.

Habits. Unrecorded in British Guiana.

257. *Phaethornis bourcierii*.

BOURCIER'S HERMIT.

Trochilus bourcierii Less. Hist. Nat. Trochil. p. 62, pl. 18, 1832 (Brazil).

Phaethornis bourcierii Salvin, Ibis, 1885, p. 431 (Camacusa, Merumé Mts., Atapurau River, Roraima); id. Cat. B. Brit. Mus. xvi. p. 278, 1892; Brabourne & Chubb, B. S. Amer. i. p. 108, no. 1027, 1912.

Adult male. Upper surface bronze-green; flight-quills uniform brown; outer tail-feathers brown tipped with buff, the central pair bronze-green tipped with white; under surface for the most part buff, somewhat darker on the abdomen.

Total length 124 mm., culmen 32, wing 58, tail 59.

The male described was collected by Mr. McConnell at Mount Roraima in October 1898.

Adult female. Similar to the adult male, but rather smaller. Wing 51 mm.

The description of the female is taken from an example in the British Museum collected by Whitely at the Merumé Mountains on July 14th, 1881—Salvin-Godman collection.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Mount Roraima (*McConnell collection*); Kamakusa, Merumé Mountains, Kamarang River, Mount Roraima (*Whitely*).

Extralimital Range. Peru, Ecuador, North Brazil.

Habits. Unrecorded in British Guiana.

258. *Phaethornis rupurumii*.

BOUCARD'S HERMIT.

Phaethornis rupurumii Boucard, The Humming Bird, ii. p. 1, January 1892 (Rupurumi River); Salvin, Cat. B. Brit. Mus. xvi. p. 663,

1892 (Rupurumi River); Hartert, Tierreich, Trochil. p. 24, 1900;
Brabourne & Chubb, B. S. Amer. i. p. 108, no. 1029, 1912.

Phaëthornis rupurununi Sharpe, Hand-l. B. ii. p. 100, 1900.

Adult male. Head, back, and upper wing-coverts bronze-green, darker and somewhat dusky on the head, lores, and ear-coverts; upper tail-coverts edged with rufous; tail-feathers bronze-green edged and tipped with white, the outer feathers darker; a line above and behind the eye and moustachial streak buff; throat blackish with grey edges to the feathers; remainder of the under surface grey with dark bases to the feathers and inclining to white on the under tail-coverts.

Total length 110 mm., culmen 26, wing 43, tail 44.

This species is not represented in the McConnell collection, and the description of the male is taken from an example in the British Museum collected by Whitely on the Rupununi River on March 31st, 1890—Salvin-Godman collection.

We have not seen a female of this species and cannot, therefore, say what the differences between the sexes are.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Rupununi River and Annai (Whitely).

Extralimital Range. Orinoco (Hartert).

Habits. Unrecorded in British Guiana.

259. *Phaëthornis longuemareus*.

LONGUEMARE'S HERMIT.

Trochilus longuemareus Less. Hist. Nat. Trochil. pp. 15, 160, pls. 2, 62, 1832 (Cayenne); Cab. in Schomb. Reis. Guian. iii. p. 709, 1848.

Pygmornis longuemareus Quelch, Timehri (2) v. p. 98, 1891 (Georgetown).

Pygmornis longuemarei Salvin, Cat. B. Brit. Mus. xvi. p. 283, 1892.

Phaëthornis longuemareus Brabourne & Chubb, B. S. Amer. i. p. 108, no. 1033, 1912.

Adult. Back dark bronze-green, as are also the upper wing-coverts; head darker than the back; upper tail-coverts rufous; central tail-feathers bronze-green tipped with white, the outer ones blackish edged and tipped with rufous; flight-quills uniform brown; superciliary line and under surface rufous; chin and a line behind the eye blackish; under tail-coverts whitish.

Total length 101 mm., culmen 24, wing 44, tail 40.

The bird described was collected on the Warema River.

According to Dr. Hartert the sexes are alike.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Warema River, Bonasika River (McConnell collection) ; Georgetown (Quelch).

Extralimital Range. Trinidad.

Habits. According to Schomburgk (Reis. Guian. iii. p. 709) the favourite haunts of this bird are the outskirts of the woods, where he often saw it hover round the flowering plants near the banks of the rivers. He did not find its nest.

Mr. J. J. Quelch, who observed this bird in Georgetown, remarks (Timehri (2) v. p. 98) :—"This species may be obtained in or around the town, though it is only seen at rare intervals about the trees and the flowering plants on the outskirts of the city."

260. *Phaethornis ruber*.

RED-VENTED HERMIT.

Trochilus ruber Linn. Syst. Nat. 10th ed. i. p. 121, 1758 (Surinam).

Trochilus pygmæus Cab. in Schomb. Reis. Guian. iii. p. 708, 1848.

Pygmornis pygmæus Salvin, Cat. B. Brit. Mus. xvi. p. 285, 1892.

Phaethornis ruber Brabourne & Chubb, B. S. Amer. i. p. 109, no. 1038, 1912.

Adult male. Head, mantle, upper back, and upper wing-coverts coppery bronze ; flight-quills brown ; lower back and upper tail-coverts chestnut ; tail-feathers bronze tipped with rufous ; a line over the eye, chin, throat, and under surface rufous ; a tuft of white feathers on the lower flanks which have dark bases ; ear-coverts and a spot on the middle of the breast blackish.

Total length 84 mm., culmen 25, wing 32, tail 29.

Adult female. Similar to the adult male. Wing 34 mm.

This species is not represented in the McConnell collection, and the descriptions of the male and female are taken from specimens in the British Museum collected at Perú—Balston collection.

Breeding-season. Unknown in British Guiana.

Nest. Built of plant-cotton, fairly deep, and suspended between two leaves of the tuga-branches (*Schomburgk*).

Eggs. White (*Schomburgk*).

Range in British Guiana. Unrecorded.

Extralimital Range. Surinam (*Linnaë*), Brazil, Eastern Bolivia.

Habits. Schomburgk writes of this bird (Reis. Guian. iii. p. 708) as one of the smallest species in British Guiana. Its flight is uncommonly swift. Its favourite haunts are the open spaces in the woods and the native foot-paths, where it hovers over the flowering bushes, vanishing all of a sudden and reappearing as quick as lightning. He often found its nest, which was suspended between two leaves of the tuga-branches, the points woven together by the bird. The nest was built of plant-cotton only. It was fairly deep, and contained two small white eggs or two young birds. The female is similar to the male, but the black stripe on the breast is absent.

261. *Phaëthornis episcopus*.

BISHOP HERMIT.

Phaëthornis episcopus Gould, P. Z. S. 1857, p. 14 (Demerara); Beebe, Our Search for a Wilderness, p. 307, 1910 (Aremu); Brabourne & Chubb, B. S. Amer. i. p. 109, no. 1041, 1912.

Pygmornis longuemareus (nec Less.), Salvin, Ibis, 1885, p. 341 (Bartica Grove, Camacusa, Roraima).

Pygmornis episcopus Salvin, Cat. B. Brit. Mus. xvi. p. 284, 1892 (Demerara).

Adult male. Head, back, and upper wing-coverts bronze-green; flight-quills uniform brown; upper tail-coverts rufous; tail-feathers similar to the back with a slight indication to white at the tips; a line above and behind the eye buffy-white; ear-coverts and a band across the breast blackish; under surface rufous.

Total length 82 mm., culmen 24, wing 30, tail 27.

Adult female. Differs from the adult male in being paler rufous below and in the almost entire absence of the black band on the breast, the more rufous on the back, and the rufous tips to the tail-feathers.

The male and female described were collected by Mr. McConnell on the Lower Mazaruni River in 1898.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Lower Mazaruni River (*McConnell collection*); Demerara (*Gould*); Mount Roraima, Kamakusa, Bartica (*Whitely*).

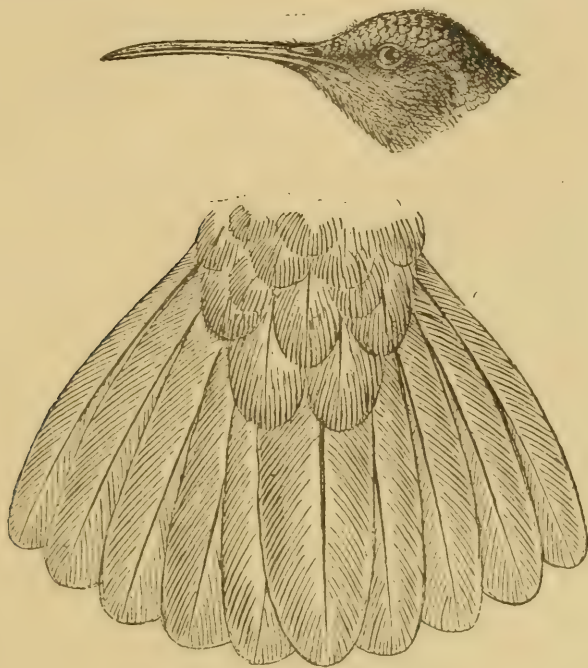
Extralimital Range. Venezuela.

Habits. Unrecorded in British Guiana.

Genus **CAMPYLOPTERUS** Swains.

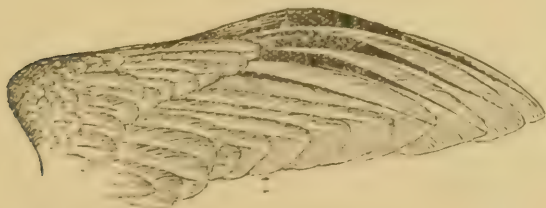
Campylopterus Swainson, Zool. Journ. iii. p. 358, 1827. Type *C. largipennis* (Bodd.).

In this genus the bill is very slightly curved, the nasal covers



Campylopterus largipennis.

Fig. 70.—To show the form of the bill and the rounded tail with its broad feathers.



Campylopterus largipennis.

Fig. 71.—To illustrate the shape of the wing and the enlarged shafts of the outer primaries of the male.

partly exposed, the shafts of the outer primaries swollen, the outer web obliterated at the enlargement, and the tail rounded.

Key to the Species.

- A. Under surface slate-grey *C. largipennis*, p. 390.
 B. Under surface rufous *C. hyperythrus*, p. 391.

262. *Campylopterus largipennis*.

BROAD-SHAFTED SABRE-WING.

Trochilus largipennis Bodd. Tabl. Pl. Enl. p. 41, 1783 (Cayenne).

Campylopterus latipennis Cab. in Schomb. Reis. Guian. iii. p. 709, 1848.

Campylopterus largipennis Salvin, Ibis. 1885, p. 432 (Bartica Grove, Camacusa, Merumé Mts., Atapurau River); id. Cat. B. Brit. Mus. xvi. p. 285, 1892 (Berbice); Brabourne & Chubb, B. S. Amer. i. p. 110, no. 1048, 1912.

Adult female. Head, upper wing-coverts, entire back, and middle tail-feathers green; flight-quills uniform blackish brown; outer tail-feathers blackish tinged with green on the outer webs and broadly tipped with white; sides of face and entire under surface slate-grey.

Total length 130 mm., culmen 24, wing 77, tail 53.

The female from which the description is taken was collected by Mr. McConnell on the Lower Mazaruni River in 1898.

Adult male. Differs from the adult female in having the shafts of the outer primary-quills much swollen and flattened. Wing 71 mm.

The description of the male is taken from a specimen collected on the Supenaam River in 1911.

Breeding-season. Unknown in British Guiana.

Nest. "Built of plant-cotton and suspended in a bush between fork-shaped twigs" (*Schomburgk*).

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Supenaam River, Bartica, Bonasika River, Lower Mazaruni River, Arweye River, Great Falls Demerara River (*McConnell collection*); Berbice (*Gould collection in the British Museum*); Bartica, Merumé Mountains, Kamakusa, Kamarang River (*Whitely*).

Extralimital Range. Northern Brazil.

Habits. According to Schomburgk (Reis. Guian. iii. p. 709) this species is generally distributed throughout British Guiana, but is most common in the damp coast-woods, where it frequents the flowering *Ravenala* and *Phænacospermum*. It is a small but very quarrelsome bird. Its little nest is built of plant-cotton and suspended in a bush between fork-shaped twigs.

Mr. J. J. Quelch observed this species in Georgetown, and remarks (Timehri (2) v. p. 98):—"The Broad-winged Sabre-wings (*Campylopterus largipennis*) are equally as uncommon as the Hermits."

263. *Campylopterus hyperythrus*.

RUFIOUS-BREASTED SABRE-WING.

Campylopterus hyperythrus Cab. in Schomb. Reis. Guian. iii. p. 709, 1848 (British Guiana); Gould, Monogr. Trochil. ii. pl. 51, 1852; Salvin, Ibis, 1885, p. 432 (Roraima); id. Cat. B. Brit. Mus. xvi. p. 295, 1892; Brabourne & Chubb, B. S. Amer. i. p. 110, no. 1055, 1912.

Adult male. Head, back, and upper wing-coverts green; flight-quills brown; middle tail-feathers bronze-green, the outer feathers rufous like the entire under surface; some of the under wing-coverts green.

Total length 119 mm., culmen 19, wing 66, tail 45.

Adult female. Similar to the adult male in plumage, but differs in the absence of the swollen shafts of the outer primary-quills. Wing 67 mm.

The male and female from which the descriptions are taken were collected by Mr. McConnell on Mount Roraima in October 1898.

Breeding-season. Unknown.

Nest. Unrecorded.

Eggs. Undescribed.

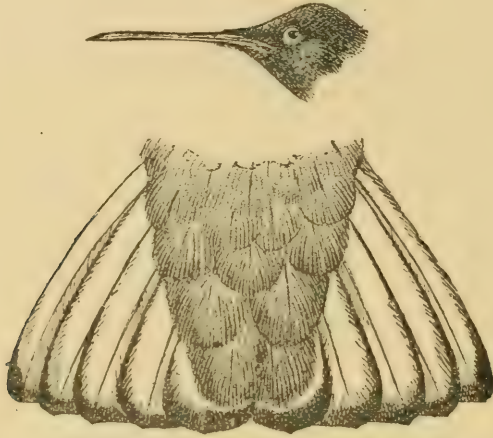
Range. Confined to British Guiana: Mount Roraima, Bartica (McConnell collection); Mount Roraima, 6000 ft. (Whitely).

Habits. Schomburgk states (Reis. Guian. iii. p. 709) that during the whole of his travels in British Guiana he only obtained one specimen, which was procured at the Roraima Mountains at an altitude of 6000 feet. It was hovering about some mimosa bushes. He did not find its nest. The "Arekunas" call it *Tukai*, which is the name usually applied by them to Humming-birds.

Genus **FLORISUGA** Bonap.

Florisuga Bonaparte, Consp. Gen. Av. i. p. 73, 1850. Type *F. mellivora* (Linn.).

In this genus the bill is slender, nearly straight, the nasal covers partly exposed, and the upper tail-coverts almost reaching to the tip of the tail.



Florisuga mellivora.

Fig. 72.—To show the form of the bill, the shape of the tail, and the long upper tail-coverts.

264. *Florisuga mellivora*.

GREAT JACOBIN.

Trochilus mellivorus Linn. Syst. Nat. 10th ed. i. p. 121, 1758 (Guiana); Cab. in Schomb. Reis. Guian. iii. p. 706, 1848.

Florisuga mellivora Salvin, Ibis, 1885, p. 433 (Merumé Mts., Atapurau River); id. Cat. B. Brit. Mus. xvi. p. 329, 1892; Brabourne & Chubb, B. S. Amer. i. p. 111, no. 1058, 1912.

Adult male. Lower hind-neck, back, upper and under wing-coverts, central tail-feathers, and sides of breast green; crown of head, throat, and fore-neck dark blue; a narrow white collar on the hind-neck; abdomen, under tail-coverts, and outer tail-feathers pure white, the last edged with brown, more especially at the tips; flight-quills purplish brown. "Bill, iris, and feet black."

Total length 108 mm., culmen 18, wing 70, tail 38.

The male described was collected on the Makauria River.

Adult female. Differs from the adult male in having the top of the head green, as also the tail-feathers, the latter somewhat darker at the tips, both above and below, the outermost feathers

more or less white at the tips, and the under surface bronzy green with more or less white on the throat and abdomen. Wing 65 mm.

The female described was collected by Mr. McConnell on the Lower Mazaruni River.

Immature male. Similar to the female, but differs in having a trace of the white collar on the hind-neck and more white on the outer tail-feathers; breast and sides of the body brown with a tinge of green, and the throat darker brown with white edges to the feathers. The description is taken from an individual collected on the Ituribisi River.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Supenaam River, Takutu River, Bartica, Bonasika River, Makauria River, Lower Mazaruni River, Arwye River, Great Falls Demerara River (*McConnell collection*); Merumé Mountains, Annai, Kamarang River (*Whitley*); Aruka (*Schomburgk*).

Extralimital Range. North Brazil, Peru, Ecuador, Colombia, Trinidad, Tobago, and Central America to South Mexico.

Habits. Schomburgk states (*Reis. Guian.* iii. p. 706) that this beautiful Humming-bird is unquestionably the most common in British Guiana. In Aruka he often saw hundreds of these birds swarming like bees round the flowering Leguminosæ. Their haunts appear to be the woods, in which they seem to select the flowering Musaceæ and Scitamineæ for obtaining food. He remarks that the young male does not attain its full plumage until it is two or three years old.

Genus **MELANOTROCHILUS** Deslongch.

Melanotrochilus Deslongchamps, *Ann. Mus. d'Hist. Nat. Caen*, i. p. 224, pl. iv. fig. 4, 1880. Type *M. fuscus* (Vieill.).

This genus is distinguished by the slightly emarginate tail, the two middle feathers being the shortest, the four outer ones on each side about equal in length and oblique at the tips, and the shorter upper tail-coverts.

265. *Melanotrochilus fuscus*.

DUSKY JACOBIN.

Trochilus fuscus Vieill. *N. Diet. d'Hist. Nat.* vii. p. 348, 1817 (Brazil).
Florisuga fusca Salvin, *Cat. B. Brit. Mus.* xvi. p. 331, 1892.

Melanotrochilus fuscus Brabourne & Chubb, B. S. Amer. i. p. 111, no. 1059, 1912.

Adult. General colour above and below velvety-black with glossy steel-green on the lower back, upper tail-coverts, and middle tail-feathers; outer tail-feathers white, edged with brown at the tips; a white line on the flanks which joins the base of the white outer tail-feathers.



Melanotrochilus fuscus.

Fig. 73.—To illustrate the shape of the bill, the slightly emarginated tail, and the shorter upper tail-coverts.

Total length 126 mm., culmen 18, wing 78, tail 45.

The bird described above was collected on the Bonasika River in December 1898.

This is the first and only known record of the occurrence of this species in British Guiana.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Bonasika River (*McConnell collection*).

Extralimital Range. Eastern Brazil.

Habits. Unrecorded in British Guiana.

NOTE.—*Thaumasius* Sclater is an emended name for *Thaumantias* Bonap., and, furthermore, it is preoccupied in *Araneæ*.

A new name, therefore, is required, for which we propose *Brabournea*, with *B. taczanowskii* (Sclater) as the type.

Genus **AGYRTRINA**, n. gen.

We propose this name for *A. whitelyi* (Boucard), and it will be available for the species classed under *Agyrtria* Reichenbach by Brabourne & Chubb, 'Birds of South America,' i. pp. 112, 113—as we find, upon further research, that Reichenbach proposed *Agyrtria* as a substitute name for *Thaumantias* Bonaparte, which equals *Polytmus* Brisson.

In this genus the culmen is feathered at the base, the anterior portion of the nasal covers is exposed, the bill is straight, and the tail emarginate.



Agyrtrina leucogaster.

Fig. 74.—To show the straight bill and the emarginated tail.

Key to the Species.

- | | |
|--|---------------------------------|
| A. Crown of head bronze-green; throat glittering green | <i>A. fimbriata</i> , p. 395. |
| B. Crown of head bright glittering green; throat white | |
| <i>a.</i> Base of lower mandible white, in contrast to the remainder of the bill, which is black; lateral tail-feathers steel-blue..... | <i>A. leucogaster</i> , p. 396. |
| <i>b.</i> Base of lower mandible black like the rest of the bill; outer tail-feathers bronze with an incomplete dark subapical bar | <i>A. whitelyi</i> , p. 397. |

266. *Agyrtrina fimbriata*.

LESSON'S EMERALD.

Trochilus fimbriatus Gmel. Syst. Nat. i. p. 493, 1788 (Cayenne).

Agyrtria tobaci (nec Gmel.), Salvin, Ibis, 1885, p. 345 (Bartica Grove, Merumé Mts., Roraima); Quelch, Timehri (2) v. p. 100, 1891 (Georgetown).

Agyrtria viridissima Salvin, Cat. B. Brit. Mus. xvi. p. 186, 1892.

Agyrtria fimbriata Brabourne & Chubb, B. S. Amer. i. p. 113, no. 1082, 1912.

Adult male. Upper surface bronze-green, darker on the head and tail, the latter having somewhat paler tips to the lateral feathers, brighter and more glittering on the under surface; middle of abdomen, vent, and under tail-coverts greyish white; flight-feathers brown.

Total length 98 mm., culmen 19, wing 55, tail 30.

The description of the male is taken from an example collected by Mr. McConnell at Mount Roraima in 1898.

Adult female. Differs from the adult male only in having the tips of the outer tail-feathers grey. Wing 53 mm.

The description of the female is taken from an example collected at Bartica.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Mount Roraima, Upper Takutu Mountains, Supenaam River, Bartica, Abary River (*McConnell collection*); Merumé Mountains, Mount Roraima, 3500 ft., Bartica (*Whitely*); Georgetown (*Quelch*).

Extralimital Range. Northern Brazil, Eastern Venezuela, and Trinidad.

Habits. Mr. J. J. Quelch observed this bird in Georgetown, and remarks (Timehri (2) v. p. 100):—"This species is not so common as *Agyrtria leucogaster*."

267. *Agyrtrina leucogaster*.

WHITE-BELLIED EMERALD.

Trochilus leucogaster Gmel. Syst. Nat. i. p. 495, 1788 ("Cayenna"); Cab. in Schomb. Reis. Guian. iii. p. 705, 1848; Quelch, Timehri (2) v. p. 100, 1891 (Georgetown).

Agyrtria leucogaster Salvin, Cat. B. Brit. Mus. xvi. p. 181, 1892 (Demerara); Brabourne & Chubb, B. S. Amer. i. p. 112, no. 1073, 1912.

Adult male. General colour above green, more glittering on the head and sides of the neck, and more coppery bronze on the upper tail-coverts and middle tail-feathers; outer tail-feathers steel-blue; flight-feathers brown; throat, middle of breast, abdomen, and under tail-coverts white; sides of breast and sides of body green. 'Mandible, except the tip, flesh-colour.'

Total length 96 mm., culmen 20, wing 52, tail 32.

The bird from which the description is taken, apparently a male, was collected on the Abary River.

The female of this species is not represented in the McConnell collection, but is, according to the 'Catalogue of Birds,' similar to the male, distinguished only by having the lateral tail-feathers obscurely tipped with bronzy grey.

Breeding-season. Unknown.

Nest. Unrecorded.

Eggs. Undescribed.

Range in British Guiana. Abary River (McConnell collection); Quonga (Whitely).

Extralimital Range. Cayenne and Surinam.

Habits. According to Schomburgk (Reis. Guian. iii. p. 705) this bird is common in British Guiana.

Mr. J. J. Quelch, who observed this species in Georgetown, remarks (Timehri (2) v. p. 100) :—"This species is extremely common in all parts."

268. *Agyrtrina whitelyi*.

WHITELY'S EMERALD.

Uranomitra whitelyi Boucard, Humming Bird, iii. p. 8, 1893; id. op. cit. iv. p. 161, 1894 (Aunai).

? *Agyrtria chionopectus* (nec Gould), Quelch, Timehri (2) v. p. 101, 1891 (Georgetown).

Agyrtria niveipectus Salvin, Cat. B. Brit. Mus. xvi. pp. 180, 659, 1892 (Quonga, Aunai).

Agyrtria whitelyi Brabourne & Chubb, B. S. Amer. i. p. 112, no. 1072, 1912.

Adult male. General colour of the upper parts green with a bronzy tinge on the back inclining to coppery bronze on the upper tail-coverts; tail bronze with a dark subapical bar; flight-feathers purplish brown; fore part of head and sides of face glistening metallic-green; throat, middle of abdomen, and under tail-coverts white; breast, sides of body, and under wing-coverts bronze-green. Bill black.

Total length 92 mm., culmen 16, wing 49, tail 25.

Adult female. Similar to the adult male but much duller, and the bright glistening metallic patch on the fore part of the head in the male is absent in the female. Wing 47 mm.

The descriptions of the male and female are taken from specimens

in the British Museum collected by Whitely at Annai in June 1890—Salvin-Godman collection.

Breeding-season. Unknown.

Nest. Unrecorded.

Eggs. Undescribed.

Range. Confined to British Guiana : Annai (*Whitely*) ; Georgetown (*Quelch*).

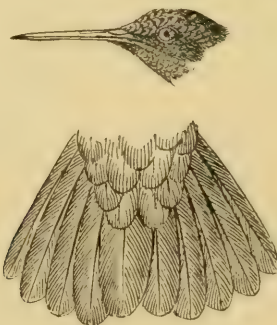
Habits. Mr. J. J. Quelch, writing on the Birds of Georgetown, remarks (*Timehri* (2) v. p. 101) :—"Another Emerald, which is distinguished from *A. leucogaster* by its smaller size and much more bronze and golden-green upper surface and sides, is also to be obtained. The males have coloured bills and the females black, and the species seems to be indistinguishable from *A. chionopectus*, except by the slightly darker tail and the less pale-green head. It seems to be but a variety of this form."

Genus SAUCEROTTEA Bonap.

Saucerottea Bonaparte, *Compt. Rend. Paris*, xxx. p. 381, April 1850.

Type *S. saucerottei* (Delat. & Bourc.).

In this genus the bill is nearly straight, the culmen is feathered at the base, the anterior portion of the nasal covers is exposed, and the tail is short and rounded or very slightly emarginate.



Saucerottea cupreicauda.

Fig. 75.—To show the form of the bill and the shape of the tail.

269. *Saucerottea cupreicauda.*

COPPER-TAILED ERYTHRONOTE.

Amazilia cupreicauda Salvin & Godman, *Ibis*, 1884, p. 452 (Roraima) ;
Salvin, *Ibis*, 1885, p. 435 (Merumé Mts.) ; Sharpe, in Gould's

Suppl. Troch. pl. 56, 1887; Salvin, Cat. B. Brit. Mus. xvi. p. 220, 1892 (Quonga).

Saucerottea cupreicauda Brabourne & Chubb, B. S. Amer. i. p. 115, no. 1104, 1912.

Adult. Back and upper wing-coverts coppery bronze-green, becoming bright green on the top of the head, throat, breast, and sides of the neck; lower back and upper tail-coverts coppery bronze; tail rufous, becoming more coppery bronze towards the tips of the feathers; flight-quills brown; abdomen and sides of the body, as well as the under wing-coverts, dull bronze; under tail-coverts rufous; thighs white.

Total length 88 mm., culmen 17, wing 50, tail 25.

The bird from which the description is taken was collected by Mr. McConnell at Mount Roraima in October 1898.

Adult female. Similar to the adult male. Wing 50 mm.

Breeding-season. Unknown.

Nest. Unrecorded.

Eggs. Undescribed.

Range. Confined to British Guiana: Mount Roraima (*McConnell collection*); Merumé Mountains, Mount Roraima, Quonga (*Whitely*).

Habits. Unrecorded.

Genus **HYLOCHARIS** Boie.

Hylocharis Boie, Isis, 1831, p. 546. Type *H. sapphirina* (Gmel.).

In this genus the tail is rounded, the bill is straight, the culmen bare almost to the base, and the nasal covers are exposed.



Hylocharis sapphirina.

Fig. 76.—To illustrate the straight bill and rounded tail.

270. *Hylocharis viridiventris*.

GREEN-VENTED SAPPHIRE.

Hylocharis viridiventris Berl. Ibis, 1880, p. 113 (Merida); Brabourne & Chubb, B. S. Amer. i. p. 117, no. 1125, 1912.

Hylocharis cyanea (nec Vieill.), Salvin, Ibis, 1885, p. 436 (Merumé Mts., Camacusa, Atapurau River, Roraima); id. Cat. B. Brit. Mus. xvi. p. 246, 1892.

Adult male. Back and upper wing-coverts green, becoming more bronzy on the upper tail-coverts; tail-feathers steel-blue; flight-quills brown; crown of head, throat, and breast glittering violet; abdomen and under tail-coverts green; thighs white.

Total length 82 mm., culmen 15, wing 49, tail 26.

The male from which the description is taken was collected on the Bonasika River.

Adult female. Differs from the adult male chiefly in the absence of the glittering violet on the head, throat, and breast, which is replaced by green on the top of the head and by grey on the throat and breast. Wing 47 mm.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Bartica, Bonasika River, Anarica River, Arwe River (*McConnell collection*); Merumé Mountains, Kamakusa, Kamarang River, Mount Roraima, Annai (*Whitely*).

Extralimital Range. North Brazil, Venezuela.

Habits. Unrecorded in British Guiana.

271. *Hylocharis sapphirina*.

GUIANA SAPPHIRE.

Trochilus sapphirinus Gmel. Syst. Nat. i. p. 496, 1788 (Guiana); Cab. in Schomb. Reis. Guian. iii. p. 706, 1848.

Hylocharis sapphirina Salvin, Ibis, 1885, p. 436 (Bartica Grove, Camacusa, Merumé Mts., Roraima); id. Cat. B. Brit. Mus. xvi. p. 245, 1892; Brabourne & Chubb, B. S. Amer. i. p. 117, no. 1127, 1912.

Adult male. Head, back, and upper wing-coverts dark bluish green; the long upper tail-coverts and middle tail-feathers coppery bronze, the outer tail-feathers richer in colour and

narrowly margined with brown; flight-quills purplish black; chin rufous; fore-neck and breast violet; abdomen and under wing-coverts dark green; thighs white; under tail-coverts rufous.

Total length 88 mm., culmen 19, wing 51, tail 25.

Adult female. Differs from the adult male chiefly in the paler chin, in the absence of violet on the fore-neck and breast, the white on the abdomen, and the dusky grey under tail-coverts.

Of the two birds described the male was collected on the Ituribisi River and the female on the Bonasika River.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. The eggs are white and two in number (*Schomburgk*).

Range in British Guiana. Ituribisi River, Bartica, Bonasika River, Supenaam River, Arawye River, Great Falls Demerara River (*McConnell collection*); Mount Roraima, 3000 ft., Kama-kusa, Merumé Mountains, Bartica (*Whitely*).

Extralimal Range. Venezuela.

Habits. Schomburgk states (*Reis. Guian. iii. p. 706*) that this bird is common in British Guiana and that its favourite haunt is near the coast in the vicinity of buildings and pastures, where it swarms round the flowering trees. It appeared to be very fond of the Labiatae. He saw it constantly hovering over the *Leonotis* when it was in bloom. The nest, which was often found by him, was constructed like those of the other Humming-birds. The eggs are white, and the clutch consists of two.

Genus **CHLORESTES** Reichenb.

Chlorestes Reichenbach, J. f. O. 1854, Aufz. d. Col. p. 7. Type *C. cyanogenys* (Wied).

This genus is distinguished by having the culmen bare nearly to the base, the nasal covers exposed, the tail steel-blue and slightly rounded.

272. *Chlorestes notatus*.

BLUE-CHINNED SAPPHIRE.

Chlorestes notatus (Reich.), *Magazin des Tierreichs* (Erlange) i. Abth. 3, p. 129, 1795 (Cayenne); Brabourne & Chubb, B. S. Amer. i. p. 118, no. 1133, 1912.

NOTE.—*Chrysurus* Bonap. *Compt. Rend. Paris*, xxx. p. 382, April 1, 1850, has priority over *Chrysuronia* Bonap., after November 1850, and must be used.

Eucephala cærulea Salvin, Ibis, 1885, p. 435 (Bartica Grove); id. Cat. B. Brit. Mus. xvi. p. 241, 1892.

Adult male. General colour above dark green; tail steel-blue; flight-feathers brown; under surface bright glittering green; thighs white. "Upper mandible black, lower mandible flesh-colour."

Total length 94 mm., culmen 16, wing 52, tail 30.



Chlorestes notatus.

Fig. 77.—To show the culmen, which is bare almost to the base, the exposed nasal covers, and the slightly rounded tail.

The description of the male is taken from an example collected by Mr. McConnell on the Mazaruni River.

Adult female. Differs from the adult male in being white on the under surface with green tips to the feathers.

The female described was collected on the Supenaam River.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Supenaam River, Bartica, Mazaruni River, Kamakabra River, Makauria River, Anarica River, Arawye River, Bonasika River (*McConnell collection*); Bartica (*Whitely*).

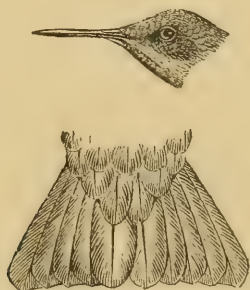
Extralimital Range. North Brazil, East Ecuador, Venezuela, Trinidad, Tobago.

Habits. Mr. J. J. Quelch, who observed this species in Georgetown, remarks (Timehri (2) v. p. 101):—"The Blue-chinned Sapphire (*Eucephala cærulea*) is also to be found on the outskirts of the town, though they are by no means common."

Genus **CHLOROSTILBON** Gould.

Chlorostilbon Gould, Monogr. Trochil. v. pl. 355, 1853. Type
C. pucherani (Boure.).

In this genus the bill is short and nearly straight, the tomia of the mandible only serrated, the interramal space nude, the culmen bare to the base, and the nasal covers exposed. The tail is short and square.



Chlorostilbon subfurcatus.

Fig. 78.—To show the straight bill, bare culmen, exposed nasal covers, and the square tail.

273. *Chlorostilbon subfurcatus*.

RORAIMA EMERALD.

Chlorostilbon subfurcatus Berlepsch, Ibis, 1887, p. 297 (Mount Roraima); Brabourne & Chubb, B. S. Amer. i. p. 119, no. 1149, 1912.

Chlorostilbon prasinus (nec Less.), Salvin, Ibis, 1885, p. 436 (Roraima); id. Cat. B. Brit. Mus. xvi. p. 56, 1892 (Demerara).

Chlorostilbon atala (nec Less.), Quelch, Timehri (2) v. p. 101, 1891 (Georgetown).

Adult male. Bright glittering green above and below; tail steel-blue; flight-feathers brown.

Total length 67 mm., culmen 14, wing 42, tail 21.

Adult female. Differs from the adult male in having the throat, middle of the abdomen, and under tail-coverts white, and pale tips to the outer tail-feathers. Wing 43 mm.

The male described was collected on the Abary River, and the female on the Ituribisi River.

Breeding-season. Unknown.

Nest. Unrecorded.

Eggs. Undescribed.

Range. Confined to British Guiana: Mount Roraima, Ituribisi River, Abary River, Kamuni River (*McConnell collection*); Annai, Mount Roraima (*Whitely*); Georgetown (*Quelch*).

Habits. Mr. J. J. Quelch, who observed this species in Georgetown, remarks (*Timehri* (2) v. p. 101):—"The smallest of the group to be found about the town, and fairly commonly, is a tiny greenlet (*Chlorostilbon atala*)."

Genus **THALURANIA** Gould.

Thalurania Gould, P. Z. S. 1848, p. 13. Type *T. nigrofasciata* (Gould).

This genus is characterized by the slender bill, the tomia of the mandible roiled inwards towards the tip, the interramal space feathered, and the tail forked.



Thalurania fissilis.

Fig. 79.—To illustrate the straight bill and forked tail.

274. *Thalurania fissilis*.

VENEZUELAN WOOD-NYMPH.

Thalurania fissilis Berlepsch & Hartert, Nov. Zool. ix. p. 87, 1902 (Caura River, Venezuela); Brabourne & Chubb, B. S. Amer. i. p. 121, no. 1172, 1912.

Trochilus furcatus (nec Gmel.), Cab. in Schomb. Reis. Guian. iii. p. 708, 1848.

Thalurania furcata (nec Gmel.), Salvin, Ibis, 1885, p. 433 (Bartica Grove, Camacusa, Merumé Mts., Roraima); id. Cat. B. Brit. Mus. xvi. p. 84, 1892 (Demerara).

Adult male. General colour above dark green; tail steel-blue; flight-feathers brown; interscapulum purple; throat and sides of neck bright glittering green; abdomen glittering purple; under wing-coverts green; thighs white.

Total length 108 mm., culmen 16, wing 53, tail 43.

Adult female. Differs from the adult male in being green above, greyish white below, and white tips to the tail-feathers.

The male and female described were collected on the Bonasika River.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Mount Roraima, Ituribisi River, Supenaam River, Bartica, Bonasika River, Makauria River, Mazaruni River, Arwyne River, Great Falls Demerara River (McConnell collection).

Extralimital Range. Venezuela.

Habits. According to Schomburgk (Reis. Guian. iii. p. 708) this species is fairly common in British Guiana and is generally found on the outskirts of woods, where it frequents the flowering Musaceae. Schomburgk did not find its nest.

Genus **PETASOPHORA** Gray.

Petasophora Gray, List Gen. B. p. 13, 1840. Type *P. serrirostris* (Vieill.).

The chief characters by which this genus is distinguished are the feathered base of the bill, the feathered nasal covers, except on their lower edges, the serrations on the upper mandible, and the emarginated tail.

Key to the Species.

- | | |
|--|------------------------------|
| A. General colour green; larger wing more than 80 mm.; bill more than 20 mm. | <i>P. germana</i> , p. 406. |
| B. General colour rufous-brown; smaller wing less than 80 mm.; bill less than 20 mm. ... | <i>P. delphinæ</i> , p. 407. |



Petasophora germana.

Fig. 80.—To show the serrated bill and the emarginated tail.

275. *Petasophora germana*.

GUIANA VIOLET-EAR.

Petasophora germana Salvin & Godman, Ibis, 1884, p. 451 (Roraima, 5000 to 6000 ft.); Salvin, Ibis, 1885, p. 434; Sharpe, in Gould's Suppl. Troch. pl. ii. 1887; Salvin, Cat. B. Brit. Mus. xvi. p. 108, 1892; Brabourne & Chubb, B. S. Amer. i. p. 123, no. 1191, 1912.
Trochilus anais Cab. in Schomb. Reis. Guian. iii. p. 707, 1848.

Adult male. Dark glittering green above and below; flight-quills brown; tail-feathers inclining to blue with a dark subapical band; throat and ear-tufts bright purple; middle of abdomen blue.

Total length 138 mm., culmen 23, wing 80, tail 52.

The description of the male is taken from an example collected by Mr. McConnell at Mount Roraima in October 1898.

Adult female. Similar to the adult male, but rather smaller. Wing 77 mm.

The description of the female is taken from one of the types in the British Museum, collected by Whitely at Mount Roraima, 6000 ft., on the 10th of August, 1883—Salvin-Godman collection.

Breeding-season. Unknown.

Nest. Unrecorded.

Eggs. Undescribed.

Range. Confined to British Guiana : Mount Roraima (*McConnell collection*) ; Mount Roraima, 5000 to 6000 ft. (*Whitely*).

Habits. Schomburgk states (Reis. Guian. iii. p. 707) that he only obtained one specimen of this beautiful Humming-bird in the Roraima Mountains at an altitude of 6000 feet ; it was hovering round isolated flowering bushes. The "Arekunas" call it *Tukui*—a name they apply to nearly all the Humming-birds.

276. *Petasophora delphinæ*.

BROWN VIOLET-EAR.

Ornismya delphinæ Lesson, Rev. Zool. 1839, p. 41 (Guiana).

Petasophora delphinæ Salvin, Ibis, 1885, p. 434 (Roraima, Merumé Mts.) ; id. Cat. B. Brit. Mus. xvi. p. 111, 1892 ; Brabourne & Chubb, B. S. Amer. i. p. 123, no. 1188, 1912.

Adult female. Dusky brown above and below ; sides of rump and upper tail-coverts rufous with dark centres to the feathers ; tail brown with a dark subapical band ; an elongated patch of green feathers on the throat ; under tail-feathers pale rufous ; ear-coverts shining purple.

Total length 111 mm., culmen 18, wing 71, tail 39.

The female described was collected by Mr. McConnell on the Mazaruni River.

An immature bird from the Anarika River has all the feathers on the upper surface edged with rufous, including the median tail-feathers.

Adult male. Similar to the adult female, but rather larger. Wing 80 mm.

The description of the male is taken from a specimen in the British Museum, collected by Whitely at the Merumé Mountains, on the 30th of June, 1881—Salvin-Godman collection.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Mazaruni River, Anarika River (*McConnell collection*) ; Mount Roraima, Merumé Mountains (*Whitely*).

Extralimital Range. Venezuela, Trinidad, Ecuador, Peru, Colombia, and Central America to Guatemala.

Habits. Unrecorded in British Guiana.

Genus **AVOCETTULA** Reichenb.

Avocettula Reichenbach, Av. Syst. pl. 39, 1849. Type *A. recurvirostra* (Swains.).

This genus is distinguished chiefly by the recurved bill and the short and rounded tail.



Avocettula recurvirostris.

Fig. 81.—To illustrate the recurved bill and the rounded tail.

277. **Avocettula recurvirostris.**

SWAINSON'S HUMMING-BIRD.

Trochilus recurvirostris Swains. Zool. Illustr. ii. pl. 105, 1821 (Cayenne).

Avocettula recurvirostris Salvin, Ibis, 1885, p. 433 (Bartica Grove);

id. Cat. B. Brit. Mus. xvi. p. 101, 1892; Brabourne & Chubb,

B. S. Amer. i. p. 123, no. 1193, 1912.

Adult male. General colour above and below dark green with a bronzy tinge on the top of the head and hind-neck and bright glittering green on the throat and fore-neck; the middle of the abdomen is more or less black, the inner webs of the outer tail-feathers rufous-brown on the upper surface and bright metallic copper on the lower aspect.

Total length 95 mm., culmen 18, wing 58, tail 28.

The male described is in the British Museum and was collected in British Guiana—Balston collection.

Adult female. Differs from the adult male in having a dusky brown central line down the throat and middle of the breast, bordered on each side with a broad white line; outer tail-feathers steel-blue tipped with white. Wing 54 mm.

The three specimens in the McConnell collection from Mount Roraima, Supenaam River, and Arawai River appear to be young males. They are very similar to the adult female in plumage, but differ in having the inner webs of the outer tail-feathers bright coppery red on the under surface.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Mount Roraima, Supenaam River, Arawai River (*McConnell collection*); Bartica (*Whitely*).

Extralimital Range. Surinam (*Penard*), Cayenne (*Swainson*), North-east Brazil.

Habits. Unrecorded in British Guiana.

Genus **ANTHRACOTHORAX** Boie.

Anthracothorax Boie, Isis, 1831, p. 545. Type *A. viridigula* (Bodd.).

This genus is characterized by having the culmen feathered at the base, the tomia of the mandible not rolled inwards towards the tip, the nasal covers partially exposed, the bill moderately decurved, and the tail rounded.



Anthracothorax viridigula.

Fig. 82.—To show the form of the bill and the rounded tail.

Key to the Species.

- A. Throat black, skirted on the sides with
blue *A. violicauda*, p. 410
B. Throat and sides of the neck rich glittering
green..... *A. viridigula*, p. 411.

278. *Anthracothorax violicauda*.

VIOLET-TAILED MANGO.

Trochilus violicauda Bodd. Tabl. Pl. Enl. p. 41, 1783 (Cayenne).

Trochilus nigricollis Vieill. N. Dict. d'Hist. Nat. vii. p. 349, 1817 (Brazil).

Trochilus mango (nec Linn.), Cab. in Schomb. Reis. Guian. iii. p. 706, 1848.

Lampornis violicauda Salvin, Ibis, 1885, p. 432 (Roraima); Quelch, Timehri (2) v. p. 99, 1891 (Georgetown); Salvin, Cat. B. Brit. Mus. xvi. p. 92, 1892.

Lampornis nigricollis Brabourne & Chubb, B. S. Amer. i. p. 123, no. 1194, 1912.

“Mango Humming-bird” (Quelch).

Adult male. Head, back, upper wing-coverts, and upper tail-coverts, as well as the middle tail-feathers, bronze-green; the outer tail-feathers purple margined with black; flight-quills brown; throat, breast, and middle of abdomen black, the black on the throat skirted on each side with steel-blue; sides of body and under wing-coverts green; under tail-coverts sooty-black with green edges; a white line on side of body.

Total length 115 mm., culmen 24, wing 67, tail 39.

We do not know the exact locality, in the Colony, of the male from which the description is taken.

Adult female. Differs from the adult male in being white on the under surface, with a line of black running down the centre, and having white tips to the outer tail-feathers.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Abary River (McConnell collection); Mount Roraima, 3500 ft., Annai (Whitely).

Extralimital Range. Cayenne (Boddaert); Northern Brazil, Colombia.

Habits. According to Schomburgk (Reis. Guian. iii. p. 706) this bird is especially numerous near the coast, where it appears in

large numbers and hovers round the flowering *Orinoko* trees (= *Erythrina*).

Mr. J. J. Quelch, who observed this species in Georgetown, remarks (Timehri (2) v. p. 99):—"The Mango Humming-bird (*Lampornis violicauda*) is extremely common about the town."

279. *Anthracothonax viridigula*.

GREEN-THROATED MANGO.

Trochilus viridigula Bodd. Tabl. Pl. Enl. p. 41, 1783 (Cayenne).

Trochilus gramineus Gmel. Syst. Nat. i. p. 488, 1788 (Guiana).

Lampornis gramineus Salvin, Ibis, 1885, p. 432; Quelch, Timehri (2) v. p. 99, 1891 (Georgetown); Salvin, Cat. B. Brit. Mus. xvi. p. 95, 1892 (Demerara); Brabourne & Chubb, B. S. Amer. i. p. 123, no. 1196, 1912.

Trochilus pectoralis Cab. in Schomb. Reis. Guian. iii. p. 706, 1848.

"Mango Humming-bird" (Quelch).

Adult male. General colour above green; flight-quills dark brown; middle tail-feathers dark brown with a steel-green gloss, outer feathers purple with dark edgings; throat and sides of neck rich glittering green; abdomen blackish more or less tinged with green, like the under tail-coverts and under wing-coverts; thighs and a patch on the sides of the body pure white.

Total length 122 mm., culmen 27, wing 70, tail 38.

Adult female. Differs from the adult male in being white on the under surface with a broad black line on the throat extending down the middle of the abdomen, and in having white tips to the outer tail-feathers which are preceded by a steel-blue band.

Immature male. Similar to the adult female, but differs in having chestnut on the cheeks and sides of the neck.

Of the birds described, the adult and immature males are from the Abary River and the female from the Great Savannas.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Abary River, Great Savannas, Great Falls Demerara River (*McConnell collection*); Georgetown (Quelch).

Extralimital Range. Cayenne (*Bodduert*); Venezuela, Northern Brazil.

Habits. Schomburgk states (Reis. Guian. iii. p. 706) that he met

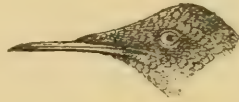
with this bird in the sunny coast-woods, where it was found generally hovering over the flowering Mucaceen. He did not find its nest.

Mr. J. J. Quelch observed this species in Georgetown, and remarks (Timehri (2) v. p. 99):—"The Mango Humming-bird (*Lampornis gramineus*) is extremely common about the town."

Genus **CHRYSOLAMPIS** Boie.

Chrysolampis Boie, Isis, 1831, p. 546. Type *C. elatus* (Linn.).

This genus is distinguished by having the bill feathered for some distance from the base along the culmen and the nasal covers completely obscured.



Chrysolampis elatus.

Fig. 83.—To show the feathering along the culmen.

280. *Chrysolampis elatus*.

RUBY-AND-TOPAZ HUMMING-BIRD.

Trochilus elatus Linn. Syst. Nat. 12th ed. i. p. 102, 1766 (Cayenne).

Trochilus moschitus Cab. in Schomb. Reis. Guian. iii. p. 705, 1848.

Chrysolampis moschitus Salvin, Ibis, 1885, p. 434; Quelch, Timehri (2) v. p. 99, 1891 (Georgetown); Salvin, Cat. B. Brit. Mus. xvi. p. 113, 1892 (Georgetown, Demerara).

Chrysolampis elatus Brabourne & Chubb, B. S. Amer. i. p. 124, no. 1199, 1912.

Adult male. Crown of head and hind-neck bright ruby-colour; back, wings, and abdomen dark brown, somewhat paler on the last, like the under wing-coverts; tail chestnut with dark edges to the tips of the feathers; throat and fore-neck rich golden-orange; under tail-coverts chestnut; a line on the sides of the body and thighs white.

Total length 93 mm., culmen 11, wing 55, tail 32.

The description of the male is taken from an example collected on the Abary River in September 1906.

Adult female. Entirely different from the adult male in being bronze-green above, dusky grey on the under surface, and in

having white tips to the outer tail-feathers, which are preceded by a violet band.

The immature male is similar to the female, but can be easily distinguished by the approach of bright feathers on the middle of the throat.

Breeding-season. Unknown in British Guiana.

Nest. In the fork of a branch, the inside of the nest was lined with vegetable down, the outside was covered with lichen. The nest contained two young birds (*Schomburgk*).

Eggs. Undescribed from British Guiana.

Range in British Guiana. Mount Roraima, Ituribisi River, Bartica, Kamuni River, Arawai River, Great Falls Demerara River (*McConnell collection*); Annai (*Whitely*); Georgetown (*Quelch*).

Extralimital Range. Cayenne (*Linné*), Brazil, Eastern Colombia, Venezuela and the adjacent islands of Trinidad and Tobago.

Habits. According to Schomburgk (*Reis. Guian.* iii. p. 705) this gorgeous species is found throughout British Guiana in open sunny places in the woods near the coast and on the Savannas. He only once found its small nest, which was in an isolated Malphigia bush in the fork of a branch and contained two young birds. The inside of the nest was lined with vegetable down, and the outside was covered with lichen. The bird probably nests in the woods. The female has a sombre plumage; its tail is quite different from that of the male. The young male attains its full plumage in the third year.

Mr. J. J. Quelch, who observed this species in Georgetown, remarks (*Timehri* (2) v. p. 99):—"The Ruby-and-Topaz (*Chrysolampis moschitus*) is occasionally met with about town, but is much more common outside."

Genus **PSILOMYCTER** Hartert.

Psilomycter Hartert, *Tierreich*, *Trochil.* p. 104, 1900. Type *P. theresia* (Da Silon).

In this genus the bill is slightly decurved at the point, the nasal covers exposed, and the tail rounded.

NOTE.—*Anthocephala* Cabanis & Heine, 1860, is preoccupied in Vermes. A new name, therefore, is required, for which we propose **Simonula** with *S. chloriceps* (Gould) as the type.



Psilomycter theresiæ.

Fig. 84.—To show the form of the bill and the slightly rounded tail.

281. *Psilomycter theresiæ.*

GOLDEN-THROAT.

Trochilus theresiæ Da Silon, Maia, Min. Bras. p. 2, 1843 (Pará).

Chrysobronchus viridissimus Salvin, Ibis, 1885, p. 435 (Bartica Grove, Merumé Mts.); id. Cat. B. Brit. Mus. xvi. p. 176, 1892 (Demerara).

Psilomycter theresiæ Brabourne & Chubb, B. S. Amer. i. p. 124, no. 1202, 1912.

Adult male. General colour above and below bright grass-green; flight-feathers dark brown; under tail-coverts more or less white at the base.

Total length 92 mm., culmen 19, wing 56, tail 31.

Adult female. Differs from the adult male in the feathers of the abdomen and under tail-coverts having a green subapical spot and white tips to the outer tail-feathers.

The male described was collected on the Ituribisi River, and the female on the Supenaam River.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Supenaam River, Bonasika River, Lower Mazaruni River, Arawai River (*McConnell* collection); Merumé Mountains, Ourunei (*Whitely*).

Extralimital Range. North-east Brazil, Venezuela.

Habits. Unrecorded in British Guiana.

Genus **POLYTMUS** Briss.

Polytmus Brisson, Orn. iii. p. 667, 1760. Type *P. thaumantias* (Linn.).

This genus is distinguished by the slightly curved bill, the culmen feathered at the base, the nasal covers exposed on the anterior portion, and the tail rather long and rounded.



Polytmus chrysobronchus.

Fig. 85.—To illustrate the curved bill and the rounded tail.

282. ***Polytmus chrysobronchus***.

SHAW'S GOLDEN-THROAT.

Trochilus chrysobronchos Shaw, Gen. Zool. viii. p. 278, 1811 (Guiana).

Trochilus viridis Cab. in Schomb. Reis. Guian. iii. p. 707, 1848.

Chrysobronchus virescens Salvin, Ibis, 1885, p. 435 (Roraima); Quelch, Timehri (2) v. p. 100, 1891 (Georgetown).

Polytmus thaumantias (part.), Salvin, Cat. B. Brit. Mus. xvi. p. 174, 1892.

Polytmus chrysobronchos Brabourne & Chubb, B. S. Amer. i. p. 125, no. 1205, 1912.

“White-tailed Golden-throat” (Quelch).

Adult male. Pale bronze-green above, brighter and more glittering on the throat and breast; tail-feathers bluish green with a

portion of the outer webs white, as are also the tips; flight-feathers brown; vent and under tail-coverts white.

Total length 105 mm., culmen 22, wing 60, tail 39.

The male described was collected on the Abary River in September 1907.

Adult female. Similar to the adult male, but differs in being not so bright; the abdomen for the most part white, and slightly smaller in size. Wing 54 mm.

Immature male. Differs from the adult in being duller above and pale rufous on the under surface, with a line of glittering green feathers down the middle of the throat.

Immature female. Is also duller on the upper surface, and uniform dark rufous below.

The descriptions of the adult female and immature birds are taken from specimens in the British Museum collected by Whitely at Mount Roraima in December, January, and June—Salvin-Godman collection.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Mount Roraima, Abary River (McConnell collection); Mount Roraima, 3500 ft., Annai (Whitely); Takutu (Schomburgk); Georgetown (Quelch).

Extralimital Range. Trinidad, Venezuela, Colombia.

Habits. Schomburgk states (Reis. Guian. iii. p. 707) that he obtained this species once near Takutu, where it was rare. The female is slightly duller than the male, and the young males are like the females. The "Macusis" call it *Komariubi*.

Mr. J. J. Quelch, who observed this bird at Georgetown, remarks (Timehri (2) v. p. 100):—"The White-tailed Golden-throat (*Chrysobronchus virescens*) is to be met with, though not commonly, on the outskirts of the town."

Genus **TOPAZA** Gray.

Topaza Gray, List Gen. B. p. 13, 1840. Type *T. pella* (Linn.).

This genus is easily distinguished by the peculiar form of the tail, two of the submedian feathers being much elongated and crossing each other.

*Topaza pella.*

Fig. 86.—To show the form of the tail.

283. *Topaza pella*.**CRIMSON TOPAZ.**

Trochilus pella Linn. Syst. Nat. i. 10th ed. p. 119, 1758 (Guiana); Cab. in Schomb. Reis. Guian. iii. p. 707, 1848; Brown, Canoe and Camp Life, p. 47, 1876 (Cartoonie River).

Topaza pella Salvin, Ibis, 1885, p. 432 (Bartica Grove, Camacusa, Merumé Mts., Atapurau River); W. L. Slater, Ibis, 1887, p. 317 (Maccasseema, Pomeroon River); Salvin, Cat. B. Brit. Mus. xvi. p. 332, 1892 (Demerara); Beebe, Our Search for a Wilderness, pp. 307, 325, 1910 (Aremu); Brabourne & Chubb, B. S. Amer. i. p. 125, no. 1208, 1912.

“Karabimiti” or “King Humming-bird” (*Quelch*).

Adult male. Crown of head, sides of face, and a band across the fore-neck deep velvety-black; hind-neck, mantle, fore-neck,

and breast deep red, paler and more coppery red on the upper wing-coverts and lower back; upper tail-coverts green; middle tail-feathers purple, the outer feathers pale chestnut; flight-feathers brown; throat-patch bright green with golden reflections; abdomen bright fiery-red; under tail-coverts dark bronze-green; under wing-coverts dark cinnamon. "Bill black; feet hazel."

Total length 198 mm., culmen 24, wing 81, tail, middle feathers 100, lateral ones 53.

The description of the male is based on a specimen collected on the Mazaruni River.

Adult female. Differs entirely from the adult male in being dark green above and below with a coppery-red throat-patch.

Breeding-season. Unknown in British Guiana.

Nest. "Their beautiful little nests are made of the silky substance which surrounds the seeds in the pod of the silk cotton tree" (*Brown*).

Eggs. White (*Lloyd Price*).

Range in British Guiana. Mount Roraima, Supenaam River, Bartica, Bonasika River, Mazaruni River (*McConnell collection*); Bartica, Kamakusa, Merumé Mountains, Kamarang River (*Whitely*); Maccasseema, Pomeroon River (*W. L. Sclater*); Aremu River (*Beebe*); Kartuni River (*Brown*).

Extralimital Range. North Brazil.

Habits. Schomburgk states (*Reis. Guian. ii. p. 424*) that the "Caraibar" called this charming species *Karabimite* on account of its long tail-feathers=Arara—Humming-bird. Its favourite haunts are the banks of the rivers, and especially the creeks. It is most lively in the early part of the day. When the sun gets high up in the sky it retires to more shaded places, where it remains until the sun begins to set. It is not found near the mouth of the rivers. Schomburgk often found its nest on a pomeroon plant, and generally built in the fork of a branch hanging over the water. The outside of the nest was the same colour as that of tanned leather. To prevent the eggs or young from falling out of the nest when rocked to-and-fro by the wind, the birds cunningly make the sides of the nest to curve inwards.

Mr. J. J. Quelch, who met with the species at the Demerara Falls, remarks (*Timehri* (2) iv. p. 115):—"The brilliant Karabimite or King Humming-bird (*Topaza pella*) were by no means uncommon in the branches overhanging the water."





Bale & Danielsson, J.^{td}

1 & 2. Heliodoxa xanthogonys ♂ ♀.
Yellow-cheeked Brilliant.

3 & 4. Agyrtrina whitelyi ♂ ♀.
Whitely's Emerald.

Mr. Lloyd Price, writing on the Nests and Eggs of some Guiana Birds, remarks (Timehri (2) v. p. 64):—"The King Humming-bird (*Topaza pella*) is fairly common in parts, especially in some of the smaller creeks, where the nests, made of a soft yellow spongy substance, will be seen fastened to the vines and creepers which overhang the water. The eggs are, like the former, white."

Mr. Beebe (Our Search for a Wilderness, p. 325) gives the following note:—"A Long-tailed Humming-bird which unconcernedly searched the undersides of leaves for insects. . . . Its nest was hung on the side of the tip of a tooroo frond."

Genus **HELIODOXA** Gould.

Heliodoxa Gould, P. Z. S. 1849, p. 95. Type *H. jacula* Gould.

The members of this genus are fairly large birds for the family; the bill is of medium length, straight and rather stout; the wings are long, reaching almost to the tip of the tail when closed; the tail is also long and deeply forked.

284. *Heliodoxa xanthogenys*.

YELLOW-CHEEKED BRILLIANT.

(Plate VIII. figs. 1, 2.)

Heliodoxa xanthogenys Salvin & Godman, Ibis, 1882, p. 80 (Merumé Mts.); Whitely, Ibis, 1884, p. 357 (Roraima); Salvin, Ibis, 1885, p. 433 (Roraima); id. Cat. B. Brit. Mus. xvi. p. 321, 1892; Hartert, Tierreich, Troch. p. 123, 1900; Brabourne & Chubb, B. S. Amer. i. p. 127, no. 1233, 1912.

Xanthogenyx salvini d'Hamonv. Bull. Soc. Zool. France, viii. p. 78, 1883 (Mount Roraima).

Adult male. General colour above and below dark green, very bright and glittering green on the throat and middle of the crown, with a small patch of violet on the middle of the throat; sides of crown and tail-feathers bronze-black; flight-feathers brown.

Total length 105 mm., culmen 17, wing 63, tail 35.

The male from which the description is taken was collected by Mr. McConnell at Mount Roraima in October 1898.

Adult female. Differs from the adult male in being paler green

NOTE.—*Agapeta* Heine, 1863, is pre-occupied in Coleoptera. We propose *Agapetornis* with *A. gularis* (Gould) as the type.

above and more or less mixed with white on the under surface, with a line of buff in front and below the eye. Wing 62 mm.

Breeding-season. Unknown.

Nest. Unrecorded.

Eggs. Undescribed.

Range. Confined to British Guiana: Mount Roraima, Lower Mazaruni River (*McConnell collection*); Mount Roraima, Merumé Mountains (*Whitely*).

Habits. Unrecorded.

Genus **HELIOTHRIX** Boie.

Heliothrix Boie, *Isis*, 1831, p. 547. Type *H. aurita* (Gmel.).

The characters by which this genus is distinguished are the wedge-shaped bill, the feathering at the base of the culmen, the hidden nasal covers, and the graduated tail.



Heliothrix aurita.

Fig. 87.—To illustrate the wedge-shaped bill and the graduated tail.

285. *Heliothrix aurita*.

BLACK-EARED FAIRY.

Trochilus auritus Gmel. *Syst. Nat.* i. p. 493, 1788 (Cayenne); Cab. in Schomb. *Reis. Guian.* iii. p. 707, 1848.

NOTE.—*Ocreatus* Gould, 1846, must replace *Spathura* Gould, 1849, in Brabourne & Chubb's, 'Birds of South America,' i. p. 134, no. 353.

Trochilus auriculatus Cab. tom. cit. p. 707.

Heliothrix auritus Salvin, Ibis, 1885, p. 434 (Bartica Grove, Merumé Mts., Atapurau River); id. Cat. B. Brit. Mus. xvi. p. 30, 1892: Quelch, Timehri (2) v. p. 99, 1891 (Georgetown).

Heliothrix aurita Brabourne & Chubb, B. S. Amer. i. p. 144, no. 1404, 1912.

“Fairy Humming-bird” (*Quelch*).

Adult male. Head, back, upper and under wing-coverts green, rather darker on the forehead and with a wash of gold on the back; tail steel-blue, the lateral feathers white, more or less marked with black at the base; flight-feathers steel-blue; under surface white; a longitudinal black patch on the sides of the face.

Total length 45 mm., culmen 17, wing 61, tail 50.

The male from which the description is taken was collected by Mr. McConnell on the Mazaruni River in November 1898.

Adult female. Differs from the adult male in having dark obsolete spots on the throat and fore-neck.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Supenaam River, Bartica, Bonasika River, Makauria River, Mazaruni River (*McConnell collection*); Bartica, Merumé Mountains, Kamarang River (*Whitely*); Georgetown (*Quelch*).

Extralimital Range. Cayenne (*Gmelin*), Venezuela, Colombia, Ecuador, Peru.

Habits. According to Schomburgk (Reis. Guian. iii. p. 707, no. 189) this beautiful species is only met with in the open woods, where it hovers round the flowering trees and bushes. When flying it spreads its tail like a fan, and at the same time flicks it up and down. This bird is not common in British Guiana.

Schomburgk, under the name of *Trochilus auriculatus* (Reis. Guian. iii. p. 707, no. 190), states that these birds live in the open and light part of the woods, where they swarm round flowering trees and Scitamineen.

Mr. J. J. Quelch observed this species in Georgetown, and remarks (Timehri (2) v. p. 99):—“The Fairy Humming-birds (*Heliothrix auritus*) are often seen about the town.”

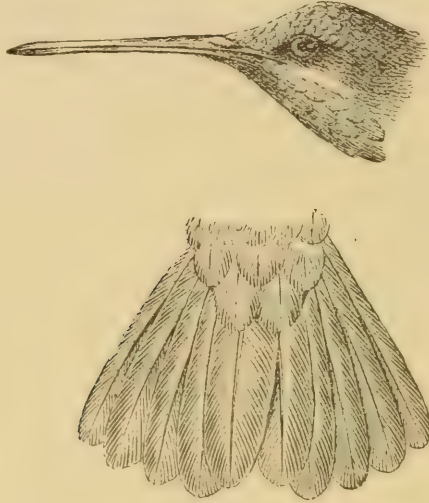
(Genus **ANTHOSCENUS** Richm.

Anthoscenus Richmond, Proc. Biol. Soc. Washington, xv. p. 85, 1902.

Type *A. longirostris* (Vieill.).

The distinguishing characters of this genus are the long and

straight bill, the bare culmen, the exposed nasal covers, and the short and rounded tail.



Anthoscenus superbus.

Fig. 88.—To illustrate the long bill, the nasal covers, and the short and rounded tail.

286. *Anthoscenus superbus*.

LONG-BILLED STAR-THROAT.

Trochilus superbus Shaw, Nat. Misc. xiii. pl. 517, 1802 (Colombia).

Heliomaster longirostris (Vieill.), Salvin, Ibis, 1885, p. 435 (Merumé Mts., Roraima, 3500 ft.).

Floricola longirostris Salvin, Cat. B. Brit. Mus. xvi. p. 229, 1892 (Merumé Mts., Roraima).

Anthoscenus superba Brabourne & Chubb, B. S. Amer. i. p. 144, no. 1412, 1912.

Adult male. Back, upper wing-coverts, rump, upper tail-coverts, and middle tail-feathers dark green with a bronzy tinge; lateral tail-feathers blackish with a white spot at the tip; flight-feathers dark brown; crown of head bright steel-blue; throat-patch bright ruby-red; breast and sides of the body green with dusky-grey bases to the feathers; a patch of white feathers on the flanks; middle of the abdomen and vent white; under tail-coverts edged with white; under wing-coverts dark green.

Total length 123 mm., culmen 34, wing 62, tail 33.

Adult female. Differs from the adult male in being brighter green above, the absence of the bright steel-blue on the crown, the ruby throat-patch, and the almost grey under surface. Wing 56 mm.

This species is not represented in the McConnell collection, and the descriptions are taken from specimens in the British Museum. The male was collected by Whitely at Mount Roraima, 3500 ft., on the 2nd of October, 1883, and the female at Annai on the 14th of June, 1892—Salvin-Godman collection.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Mount Roraima, Merumé Mountains, Annai (*Whitely*).

Extralimital Range. Colombia (*Shaw*), Trinidad, Venezuela, Peru, Bolivia.

Habits. Unrecorded in British Guiana.

Genus **CALLIPHLOX** Boie.

Calliphlox Boie, Isis, 1831, p. 544. Type *C. amethystina* (Bodd.).

This genus is distinguished by its small size, straight bill, and deeply forked tail.



Calliphlox amethystina.

Fig. 89.—To show the straight bill and the deeply forked tail.

287. *Calliphlox amethystina*.

THE AMETHYST.

Trochilus amethystinus Bodd. Tabl. Pl. Enl. p. 41, 1783 (Cayenne).

Calliphlox amethystina Salvin, Ibis. 1885, p. 434 (Merumé Mts., Roraima); id. Cat. B. Brit. Mus. xvi. p. 386, 1892 (Demerara); Brabourne & Chubb, B. S. Amer. i. p. 145, no. 1841, 1912.

Adult male. General colour above bronze-green; flight-feathers brown; tail-feathers brown edged with cinnamon on the inner webs; throat amethyst followed by dull white; abdomen rusty brown.

Total length 85 mm., culmen 16, wing 38, tail 32.

The male from which the description is taken is in the British Museum, and was collected by Whitely on the Kamarang River in August 1885—Balston collection.

Adult female. Bronzy green above; throat dull white, sides of neck brown; abdomen washed with chestnut. Wing 39 mm.

The female described was collected on the Kamuni River.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Kamuni River, Merumé Mountains, Mount Roraima (*Whitely*).

Extralimital Range. Cayenne (*Boddaert*), Trinidad, Venezuela, East Ecuador, Brazil.

Habits. Unrecorded in British Guiana.

Genus **LOPHORNIS** Less.

Lophornis Lesson, Traité d'Orn. p. 284, 1830. Type *L. ornatus* (Bodd.).

This genus is distinguished by the occipital crest, the ornamental tufts on the sides of the face, and the rounded and emarginated tail.

Key to the Species.

- A. Crest and ornamental feathers on the sides of the face rufous; throat bright green *L. ornatus*, p. 425.
- B. Crest and ornamental feathers on the sides of the face green; throat black *L. paroninus*, p. 426.

*Lophornis ornatus.*

Fig. 90.—To show the occipital crest, the tufts on the sides of the face, and the rounded and emarginated tail.

288. *Lophornis ornatus*.

TUFTED COQUETTE.

Trochilus ornatus Bodd. Tabl. Pl. Enl. p. 39, 1783 (Cayenne); Cab. in Schomb. Reis. Guian. iii. p. 705, 1848.

Lophornis ornatus Salvin, Ibis, 1885, p. 433 (Roraima); id. Cat. B. Brit. Mus. xvi. p. 420, 1892 (Carimang River); Brabourne & Chubb, B. S. Amer. i. p. 146, no. 1432, 1912.

Adult male. Back, upper wing-coverts, and abdomen bronze-green, somewhat duller on the last; occipital crest pale chestnut; fore part of head, sides of face, and throat bright glittering green; a tuft of feathers on each side of hinder face white tipped with green; under tail-coverts edged with dark chestnut; a line of white across the lower back; tail-feathers deep chestnut edged with dark brown; upper tail-coverts dusky brown; flight-quills brown.

Total length 69 mm., culmen 7, wing 38, tail 30.

Immature male. Differs from adult male in having the tufts on the sides of the hinder face much less developed, and in being pale cinnamon in colour with green spots.

Adult female. Differs entirely from the adult male in the absence of the crest on the head and tufts on sides of the hinder face, also in having the entire under surface cinnamon.

We do not know the exact localities, in the Colony, of the birds described.

Range in British Guiana. Mount Roraima, Kamarang River (Whitely); Kanuku Mountains (Schomburgk).

Extralimital Range. Trinidad, Venezuela.

Habits. Schomburgk states (Reis. Guian. iii. p. 705) that this beautiful Humming-bird is one of the rarest species in British Guiana. During his stay in the Colony he only collected some few specimens from the Canuku Mountains which were brought to him by the Indians. Its nidification was unknown to him.

289. *Lophornis pavoninus*.

GUIANA COQUETTE.

Lophornis pavoninus Salvin & Godman, Ibis, 1882, p. 81 (Merumé Mts.); Whitely, Ibis, 1884, p. 357 (Roraima); Salvin, Cat. B. Brit. Mus. xvi. p. 427, 1892 (Roraima); Brabourne & Chubb, B. S. Amer. i. p. 147, no. 1438, 1912.

Polemistria pavonina Salvin. Ibis, 1885, p. 433 (Roraima, 3000–3500 ft.); d'Hamonv. Bull. Soc. Zool. France, xi. p. 317, 1886 (Merumé Mts.).

Adult male. General colour above green including the back, scapulars, and upper wing-coverts; an indistinct band of buffy-white across the rump; upper tail-coverts tinged with coppery bronze; tail bronze-green; flight-quills purplish brown; crown of head bright glistening green, with a dark longitudinal line from the base of the bill along the middle of the crown which is bright copper-colour on the hinder crown; lores, fore part of cheeks, and chin black tinged with green on the throat; the elongated feathers on the hinder cheeks bright pale green with a circular subapical black spot on each feather, the base of the feathers cinnamon rufous with a diamond-shaped white spot; remainder of the under surface green with blackish bases to the feathers, the short under tail-coverts tipped with white. Bill black.

Total length 85 mm., culmen 11, wing 46, tail 28.

The description of the male is taken from the type in the British Museum which was collected by Whitely at the Merumé Mountains on the 25th of July, 1881—Salvin-Godman collection.

Adult female. General colour above bronze-green including the head, back, scapulars, upper wing-coverts, and middle tail-feathers; a narrow band of buffy-white across the rump; outer

tail-feathers dusky with pale buff tips; flight-quills the same as in the male; a black spot immediately in front of the eye; lores, cheeks, and chin pale rufous; throat dusky brown with buffy-white tips to the feathers; sides of the body green; middle of abdomen more or less grey; under tail-coverts green narrowly margined with rufous. Wing 37 mm.

The female described was collected by Whitely at Mount Roraima, 3000 feet, on July 3rd, 1883—Salvin-Godman collection.

The young male is very similar to the adult female, but differs in having the chin and throat almost entirely rufous.

Immature male. Differs from the adult male in having the head dusky, a dark green patch on the middle of the throat, and the chin and cheeks streaked with white.

The two immature birds were also collected by Whitely at Mount Roraima, 3000 feet, in July 1883—Salvin-Godman collection.

Breeding-season. Unknown.

Nest. Unrecorded.

Eggs. Undescribed.

Range. Confined to British Guiana: Bartica (*McConnell collection*); Merumé Mountains, Mount Roraima (*Whitely*).

Genus **DISCOSURA** Bonap.

Discosura Bonaparte, Compt. Rend. Paris, xxx. p. 382, April 1850.
Type *D. longicauda* (Gmel.).

In this genus the tail is deeply forked, the outer feather on each side much extended with a spatule at the tip of each.

290. *Discosura longicauda*.

RACKET-TAIL.

Trochilus longicauda Gmel. Syst. Nat. i. p. 498, 1788 (Cayenne).

Trochilus platurus Cab. in Schomb. Reis. Guian. iii. p. 709, 1848.

Discura sp. inc., Salvin, Ibis, 1885, p. 434 (R. Atapurau).

Discura longicauda Salvin, Cat. B. Brit. Mus xvi. p. 431, 1892 (Carimang River).

Discosura longicauda Brabourne & Chubb, B. S. Amer. i. p. 148, no. 1449, 1912.

Adult male. General colour above dark green, with a line of white across the lower back, tail-feathers brown with white shafts, the two outer feathers extended beyond the others, and having a spatule at the tips; crown of head, throat, and breast bright grass-green, the feathers on the lower breast white at the base with a green disc at the tip; abdomen dusky brown with gold spots;



Discosura longicauda.

Fig. 91.—To show the short straight bill and the spatulated tail-feathers.

vent and thighs white ; under tail-coverts dusky with pale edges ; under wing-coverts green ; flight-quills brown.

Total length 105 mm., culmen 15, wing 48, outer tail-feathers 51, middle tail-feathers 29.

The male described was collected on the Abary River in September 1907.

Adult female. Differs from the adult male in the absence of the extended tail-feathers and the bright green throat, which is dusky with a line of white on either side.

Total length 104 mm., culmen 14, wing 48, outer tail-feathers 51, middle tail-feathers 29.

Immature male. Differs from the adult female in having pale cinnamon on the sides of the throat and middle of the abdomen, the outer tail-feathers also tipped with cinnamon ; a line on lower back is of the same colour.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribi-i River, Bartica, Abary River, Kamuni River, Ireng River (*McConnell collection*) ; Kamarang River (*Whitely*).

Extralimital Range. Cayenne (*Gmelin*), Brazil.

Habits. Schomburgk states (*Reis. Guian.* iii. p. 709) that he only obtained one specimen of this beautiful Humming-bird during his stay in British Guiana—and that was from Demerara, near “Golden Hill.” He found it hovering in front of a flowering bush. According to the natives it is very rare.

Order TROGONES.

Family TROGONIDÆ.

The Trogons are birds of medium size with soft and fluffy plumage, which is very brightly coloured and highly ornamented by their vertical crests, much developed upper wing-coverts and upper tail-coverts, as well as the elongated tail-feathers in the genus *Pharomacrus*.

The bill is somewhat depressed, broad at the base, and hooked at the tip, with a large number of rictal bristles at the base.

The wings are rather short and rounded. The third, fourth, fifth, and sixth feathers are the longest. The secondaries are short in comparison with the length of the primaries.

The tail is long and consists of twelve feathers, the lateral ones being graduated. The legs are short and the feet are small; the toes are four in number, two of which, the first and second, are directed backwards—a character which is peculiar to the Trogons alone.

The family is composed of nine genera and about sixty species. Their distribution is in the tropical portions of Africa, Asia, Central and South America. Two genera and twenty species occur in South America, of which one genus and five species are represented in British Guiana.

Genus TROGON Linn.

The males of this genus have bright metallic colours, but no ornamental developments, while the females have no metallic colours. The bill is hooked at the tip and strongly serrated on the cutting-edges of both mandibles; the wings are short in proportion to the tail, which is rather long and rounded.

NOTE.—*Loddigiornis* Bonap. *Compt. Rend. Paris*, xxx. p. 381, April 1, 1850, has priority over *Loddigesia* Bonap. after November 1850, and must be accepted.

Key to the Species.

- A. Abdomen red, not orange or yellow.
- a.* Larger, wing more than 130 mm.; tail uniform, neither tipped nor barred with white *T. melanurus*, ♂, p. 430.
 - a'.* Head, back, and breast grey *T. melanurus*, ♀, p. 430.
 - b.* Smaller, wing less than 130 mm.; tail particoloured, lateral feathers narrowly barred and broadly tipped with white. *T. personatus*, ♂, p. 431.
 - b'.* Head, back, and breast cinnamon-brown *T. personatus*, ♀, p. 431.
- B. Abdomen orange or yellow, not red.
- c.* Larger, wing more than 130 mm.
 - c'.* Abdomen and under tail-coverts yellow, outer tail-feathers obliquely tipped with white *T. viridis*, ♂, p. 432.
 - d'.* Outer tail-feathers barred on the outer webs and tipped with white *T. viridis*, ♀, p. 432.
 - d.* Smaller, wing less than 130 mm.
 - e'.* Head and breast bright green *T. rufus*, ♂, p. 433.
 - e''.* Head and breast cinnamon-brown. *T. rufus*, ♀, p. 433.
 - f'.* Head and breast dark blue *T. violaceus*, ♂, p. 434.
 - f''.* Head and breast slate-grey *T. violaceus*, ♀, p. 434.

291. Trogon melanurus.**BLACK-TAILED TROGON.**

Trogon melanurus Swains. Anim. in Menag. p. 329, 1837 (Guiana); Cab. in Schomb. Reis. Guian. iii. p. 718, 1848; Salvin, Ibis, 1886, p. 61 (Bartica Grove, Camacusa, Atapurau River); Ogilvie-Grant, Cat. B. Brit. Mus. xvii. p. 472, 1892 (Demerara River); Brabourne & Chubb, B. S. Amer. i. p. 150, no. 1470, 1912.

Adult male. Head, entire back, and breast bluish green; lesser upper wing-coverts like the back; median and greater upper wing-coverts minutely speckled with black and white; bastard-wing, primary-coverts, and quills black with white edgings to some of the primaries; tail bluish green with blackish inner webs to the outer feathers, the outermost feather on each side has pale mottlings on the outer web; forehead, sides of face, and throat black; abdomen and under tail-coverts bright red; an irregular white band across the breast dividing the green from the red; thighs and under wing-coverts blackish with pale edges to the latter.

Total length 275 mm., culmen 22, wing 161, tail 146, tarsus 15.

The description of the male is based on an example collected on the Mazaruni River.

Adult female. Differs from the adult male in the absence of the metallic colour in the plumage; the head, back, throat, and breast slate-grey. Wing 159 mm.

The female described was collected at Bartica.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Bartica, Mazaruni River, Abary River (*McConnell collection*).

Extralimital Range. Northern Brazil, Peru, Ecuador, Colombia.

Habits. According to Schomburgk (*Reis. Guian.* iii. p. 708) this bird is similar in habits and mode of life to *T. melanopterus* (= *T. viridis*), but very local in its distribution. It was common on the sandhills near the Demerara River and on the Essequibo in the vicinity of the Waraputa, where it preferred the light open patches in the woods.

292. Trogon personatus.

MASKED TROGON.

Trogon personatus Gould, *Ann. & Mag. Nat. Hist.* ix. p. 237, 1842 (Cordillerian Andes of Peru); Salvin, *Ibis*, 1886, p. 60 (Roraima); Ogilvie-Grant, *Cat. B. Brit. Mus.* xvii. p. 446, 1892.

Adult male. Head, entire back, and fore-neck shining green tinged with bronze on the back and fore-neck; upper median and greater wing-coverts black with minute wavy white bars or specklings; bastard-wing, primary-coverts, and quills black, the outer webs of the primary-quills white; middle tail-feathers blackish with bronze on the outer webs, the lateral rectrices white narrowly barred with black, becoming entirely black towards the base; forehead, chin, and sides of face black; a broad white band across the chest; remainder of the under surface red shading to rose-colour; thighs black; under wing-coverts blackish. "Bill yellow."

Total length 230 mm., culmen 16, wing 127, tail 130, tarsus 15.

Adult female. Differs from the adult male in being pale cinnamon-brown on the head, back, and fore-neck. The middle tail-feathers cinnamon and the abdomen pale pink. Wing 126 mm.

The male and female from which the descriptions are taken were collected by Mr. McConnell at Mount Roraima in October 1898.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Mount Roraima (*McConnell collection*); Mount Roraima, 3500 ft. (*Whitely*).

Extralimital Range. Colombia, Ecuador, Peru, Bolivia.

Habits. Unrecorded in British Guiana.

293. *Trogon viridis*.

GREEN TROGON.

Trogon viridis Linn. Syst. Nat. 12th ed. i. p. 167, 1766 (Cayenne); Salvin, Ibis, 1886, p. 61 (Bartica Grove, Camacusa, Merumé Mts., Atapurau River); Ogilvie-Grant, Cat. B. Brit. Mus. xvii. p. 458, 1892 (Demerara); Brabourne & Chubb, B. S. Amer. i. p. 149, no. 1461, 1912.

Trogon melanopterus (nec Swains.), Cab. in Schomb. Reis. Guian. iii. p. 718, 1848; Brown, Canoe and Camp Life, p. 154, 1876 (Quitaro River).

"Bowclorou" (*Brown*).

Adult male. Head and breast deep blue; back metallic-green becoming blue on the upper tail-coverts; wings black with white edges to some of the primaries; middle tail-feathers bronze-green tipped with black and a shade of blue on the outer webs, the two pairs next to the middle ones black on the inner webs, lateral feathers black tipped with white; abdomen and under tail-coverts orange-yellow; under wing-coverts black fringed with white; thighs black.

Total length 305 mm., culmen 21, wing 146, tail 150, tarsus 13.

The male described was collected on the Mazaruni River.

Adult female. Differs from the adult male in being dusky grey on the upper surface with pale narrow bars on the upper wing-coverts and white markings on the primary and secondary quills; the outer tail-feathers barred and tipped with white. Wing 144 mm.

Breeding-season. Unknown in British Guiana.

Nest. "The nest merely consists of a hole scooped out of a large round termites' nest built on the stem of a tree" (*Brown*); "its nest is like that of a Pigeon's, built loosely between the branches of trees" (*Schomburgk*).

Eggs. Undescribed from British Guiana.

Range in British Guiana. Mount Roraima, Upper Takutu Mountains, Mazaruni River (*McConnell collection*); Bartica, Kamakusa, Merumé Mountains, Kamarang River, Quemeta (*Whitely*); Kwitaro River (*Brown*).

Extralimital Range. Brazil, Bolivia, Peru, Ecuador, Colombia, Venezuela.

Habits. Schomburgk states (Reis. Guian. iii. p. 718) that this bird haunts the light parts of the woods and trees near the river-banks. It is often found associated with *Ampelis* on the fig and brosimum trees, the fruit of both having a great attraction for the bird. Insects also form a great part of its diet; it catches them in the same manner as the Galbulidæ. The male and female, when watching for insects, sit near each other on the same branch. Its nest is like that of a Pigeon's, built loosely between the branches of trees. In the morning it utters its loud call (*cf.* vol. i. p. 127). Its flight is similar to that of a Toucan. The "Macusis" call it *Sorrokoko* and the "Warraus" *Taitapih*.

Mr. Barrington Brown (Canoe and Camp Life, p. 154) gives the following note:—"Close to my tent at that place (Ataraipu, Quitaro River) there was the nest of a common, dark-coloured Trogon, called Bowclorou; the nest merely consists of a hole scooped out of a large, round termites' nest, built on the stem of a tree. In it were two young ones, which kept up a most doleful whistling all day, while the mother sat on a tree-bough near by, being afraid, from our near proximity, to approach them."

294. *Trogon rufus*.

BLACK-THROATED TROGON.

Trogon rufus Gmel. Syst. Nat. i. p. 404, 1788 (Cayenne); Brabourne & Chubb, B. S. Amer. i. p. 149, no. 1460, 1912.

Trogon atricollis Cab. in Schomb. Reis. Guian. iii. p. 719, 1848; Salvin, Ibis, 1886, p. 61 (Bartica Grove, Camacusa, Merumé Mts.); Ogilvie-Grant, Cat. B. Brit. Mus. xvii. p. 455, 1892 (Demerara).

Adult male. Hinder part of head, lesser upper wing-coverts, back, and middle tail-feathers metallic green, inclining to bluish on the upper tail-coverts; middle tail-feathers tipped with black, the next two pairs have the inner webs black, lateral feathers white with black bases and narrowly barred with black towards the tips; median, greater upper wing-coverts, and outer webs of secondaries minutely speckled with white, some of the greater coverts black on the inner webs; bastard-wing, primary-coverts, and quills black with pale edges to the outer webs of the primaries; chin, forehead, and sides of face black; remainder of the under

surface orange-yellow ; under wing-coverts blackish ; thighs black.

Total length 245 mm., culmen 16, wing 115, tail 114, tarsus 13.

The male described was collected on the Mazaruni River.

Adult female. Differs from the adult male in being pale brown on the head, back, throat, and fore-neck. The under surface is pale yellow and the middle tail-feathers chestnut.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Bartica, Mazaruni River (*McConnell collection*) ; Bartica, Kamakusa, Merumé Mountains (*Whitely*).

Extralimital Range. Brazil, Peru, Ecuador, Colombia.

Habits. This bird, according to Schomburgk (*Reis. Guian.* iii. p. 719), is like *T. meridionalis* (= *T. violaceus*) in its habits and mode of life.

295. Trogon violaceus.

SOUTHERN TROGON.

Trogon violaceus Gmel. *Syst. Nat.* i. p. 404, 1788 (Surinam) ; Brabourne & Chubb, *B. S. Amer.* i. p. 150, no. 1464, 1912.

Trogon meridionalis Cab. in Schomb. *Reis. Guian.* iii. p. 719, 1848 ; Salvin, *Ibis*, 1886, p. 61 (Bartica Grove, Camacusa, Atapurau River, Roraima, 3500 ft.).

Adult male. Top of head, fore-neck, and breast greenish blue ; forehead, sides of face, and throat dull black ; back metallic-green, inclining to blue on upper tail-coverts ; middle tail-feathers green tipped with black, the next two pairs black on inner webs, outer feathers black barred and tipped with white ; upper wing-coverts minutely speckled with white, as are also the outer webs of the secondary-quills ; bastard-wing, primary-coverts, and quills black with white edges to some of the primaries ; abdomen and under tail-coverts orange-yellow ; thighs black ; under wing-coverts blackish with pale edges.

Total length 223 mm., culmen 16, wing 124, tail 115, tarsus 12.

The male from which the description is taken was collected on the Ituribisi River in October 1908.

Adult female. Differs from the adult male in the absence of metallic in any portion of the plumage ; the head, back, and breast very dark lead-grey.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Mount Roraima, Upper Takutu Mountains, Ituribisi River, Bartica (*McConnell collection*); Mount Roraima, 3500 ft., Bartica, Kamakusa, Kamarang River (*Whitely*).

Extralimital Range. Surinam (*Gmelin*), Trinidad.

Habits. Schomburgk states (*Reis. Guian.* iii. p. 719) that the mode of life and habits of this bird are like those of *T. melanopterus* (= *T. viridis*). It is common in the neighbourhood of the Demerara River.

Order COCCYGES.

Family CUCULIDÆ.

This family, which is distributed throughout the temperate and tropical regions of the world, has many peculiar forms, and is divided into six subfamilies, five of which, including the genera *Coccyzus*, *Piaya*, *Neomorphus*, *Tapera*, *Dromococcyx*, *Crotophaga*, and *Giura*, with thirty species, occur in South America—six of the genera and twelve of the species are represented in British Guiana.

The Cuckoos are of medium size with long tails, short legs, and zygodactyle feet.

Genus COCCYZUS Vieill.

Coccyzus Vieillot, *Anal. nouv. Orn.* p. 28, 1816. Type *C. americanus* (Linn.).

The members of this genus have ten tail-feathers, tail fan-shaped, nostrils oval, and bill decurved.

Key to the Species.

- A. Under surface rufescent buff.
 - a. Larger, wing more than 120 mm., tail more than 140 mm.; bill particoloured *C. minor*, p. 436.
 - b. Smaller, wing less than 120 mm., tail less than 140 mm.; bill uniform black *C. melacoryphus*, p. 437.
- B. Under surface white or greyish white.
 - c. Inner webs of quills rufous *C. americanus*, p. 437.
 - d. Inner webs of quills white or greyish white *C. euleryi*, p. 438.

296. *Coccyzus minor*.

MANGROVE CUCKOO.

Cuculus minor Gmel. Syst. Nat. i. p. 411, 1788 (Cayenne).

Coccygus helviventris Cab. in Schomb. Reis. Guian. iii. p. 714, 1848.

Coccygus minor Salvin, Ibis, 1886, p. 64 (British Guiana); Quelch, Timehri (2) v. pp. 95, 96, 1891 (Georgetown).

Coccygus minor Shelley, Cat. B. Brit. Mus. xix. p. 304, pl. xii. fig. 2, 1891 (British Guiana); Brabourne & Chubb, B. S. Amer. i. p. 151, no. 1474, 1912.

"Baby-bird," "Foolish-bird" (Quelch).

Adult male. Back, wings, and middle tail-feathers pale greyish brown; inner webs of quills, towards the base, deep buff; middle tail-feathers blackish towards the tips, outer feathers for the most part black with broad white tips; head ash-grey; a broad black line in front and behind the eye; throat and fore-neck ashy grey with a tinge of buff; abdomen, under tail-coverts, and quill-lining deep buff.

Total length 310 mm., culmen 26, wing 133, tail 166, tarsus 27.

The male from which the description is taken was collected on the Essequibo River.

Adult female. Similar in the colour of the plumage to the adult male, but larger in size. Wing 141 mm.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Essequibo River (McConnell collection); Georgetown (Quelch).

Extralimital Range. Cayenne (*Gmelin*), North-east Brazil, Colombia, Venezuela, Trinidad, West India Islands, Central America to Mexico and Coast of Louisiana.

Habits. According to Schomburgk (Reis. Guian. iii. p. 714) the habits of this bird are the same as those of *Piaya minutus* (= *P. rutila*, p. 441). The "Warraus" call it *Kuaquei*.

Mr. J. J. Quelch (Timehri (2) v. pp. 95, 96) met with this bird in Georgetown, where it is known by the name of Baby-bird. He also writes that it is sometimes seen among the large mango and sour-sop trees about the town, where, except when it is in the act of catching insects, it remains as if dead to its surroundings. The name Foolish-bird is also applied to this bird.

297. *Coccyzus melacoryphus*.

BLACK-BILLED CUCKOO.

Coccyzus melacoryphus Vieill. N. Diet. d'Hist. Nat. viii. p. 271, 1817 (Paraguay); Brabourne & Chubb, B. S. Amer. i. p. 151, no. 1475, 1912.

Coccyzus melanocoryphus Salvin, Ibis, 1886. p. 64 (Bartica Grove, Yuruani River).

Coccyzus melanocoryphus Shelley, Cat. B. Brit. Mus. xix. p. 307, 1891.

Adult male. Head dark slate-grey; back and wings earth-brown, edges of primary and secondary quills inclining to rufous, more broadly on the inner webs; middle tail-feathers bronze, outer feathers darker and tipped with dull white, which extends down the edge of the outer feather; eyelids and a spot behind the eye black; hinder face and sides of neck ash-grey; entire under surface rufescent buff, somewhat paler on the abdomen.

Total length 245 mm., culmen 21, wing 111, tail 132, tarsus 25.

The male from which the description is taken was collected on the Supenaam River.

Adult female. Is like the adult male in the colour of the plumage, but rather larger. Wing 122 mm.

The female from which the description is taken is in the British Museum and was collected by Whitely on the Yuruani River, 2700 ft., in June 1883—Salvin-Godman collection.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Ituribisi River, Supenaam River, Makauria River, Abary River, Mazaruni River (*McConnell collection*); Bartica, Yuruani River (*Whitely*).

Extralimital Range. Trinidad, Venezuela, Ecuador, Peru, Eastern Brazil, Paraguay, Argentina.

Habits. Unrecorded in British Guiana.

298. *Coccyzus americanus*.

YELLOW-BILLED CUCKOO.

Cuculus americanus Linn. Syst. Nat. 10th ed. i. p. 111, 1758 (Carolina).

Coccyzus americanus Shelley, Cat. B. Brit. Mus. xix. p. 308, 1891; Brabourne & Chubb, B. S. Amer. i. p. 151, no. 1476, 1912.

Coccygus americanus Quelch, Timehri (2) v. pp. 95, 96, 1891 (Georgetown); id. op. cit. x. p. 263, 1896 (migration).

"American Cuckoo," "Baby-bird," "Foolish-bird" (*Quelch*).

Adult male. Upper surface greyish brown, becoming more bronze-brown on the middle tail-feathers, outer feathers blackish tipped, and edged on the outermost with white; inner webs of primary and secondary quills rufous; eyelids and upper edge of ear-coverts dark brown; under surface pearly-white with a tinge of grey on the breast and sides of the body; under wing-coverts creamy-white; quill-lining rufous.

Total length 270 mm., culmen 24, wing 150, tail 149, tarsus 27.

The description of the male is taken from an example collected on the Lower Mazaruni River in 1898.

Adult female. Similar to the adult male both in the colour of the plumage and in the measurements.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Lower Mazaruni River (*McConnell collection*); Georgetown (*Quelch*).

Extralimital Range. South America generally to Argentina, Central America, West India Islands, North America, and occasional in Europe.

Habits. Mr. J. J. Quelch observed this species in Georgetown, and remarks (Timehri (2) v. pp. 95, 96):—"This species is commonly known by the name Baby-bird. It is sometimes seen among the large mango and sour-sop trees about the town, where, except when it is in the act of catching insects, it remains as if dead to its surroundings. The name Foolish-bird is also applied to this bird. Like the other members of the family."

He also remarks (*op. cit.* (2) x. p. 263):—"A special example of migrant is to be found in the American Cuckoo (*Coccygus americanus*)."

299. *Coccyzus euleri*.

EULER'S CUCKOO.

Coccyzus euleri Cab. J. f. O. 1873, p. 73 (Cantagallo); Brabourne & Chubb, B. S. Amer. i. p. 151, no. 1477, 1912.

Coccyzus americanus (nec Linn.), Shelley, Cat. B. Brit. Mus. xix. p. 308, part, 1891.

Adult female. General colour above earth-brown; central tail-

feathers more bronze-brown, lateral feathers blackish tipped, and edged on the outer feathers with white; inner webs of primary and secondary quills white; throat, fore-neck, and breast silvery grey like the thighs and sides of the body; abdomen, axillaries, and under wing-coverts white, quill-lining similar but tinted with cream-colour.

Total length 250 mm., culmen imperfect, wing 135, tail 133, tarsus 22.

The female described was collected on the Supenaam River.

Adult male. Similar to the adult female. Wing 130 mm.

The male which was examined by us is in the British Museum, and was collected by Whitely at Annai on June 24th, 1889—Salvin-Godman collection.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Supenaam River (*McConnell collection*).

Extralimital Range. Brazil, Argentina.

Habits. Unrecorded in British Guiana.

Genus **PIAYA** Less.

Piaya Lesson, *Traité d'Orn.* p. 139, 1831. Type *P. cayana* (Linn.).

The members of this genus have short wings and long tails. The wing is short, curved, and fits close to the body. The primary-quills are longer than the secondaries, exceeding the latter by the length of the tarsus.

Key to the Species.

- | | |
|--|----------------------------------|
| A. Larger, wing more than 140 mm., tail more than 250 mm.; throat cinnamon | <i>P. cayana</i> , p. 439. |
| B. Smaller, wing less than 140 mm., tail less than 250 mm.; throat chestnut. | |
| <i>a.</i> Larger, wing more than 120 mm., tail more than 190 mm.; head grey; abdomen black | <i>P. melanogaster</i> , p. 441. |
| <i>b.</i> Smaller, wing less than 120 mm., tail less than 190 mm.; head chestnut; abdomen pale brown | <i>P. rutila</i> , p. 441. |

300. *Piaya cayana*.

CHESTNUT CUCKOO.

Cuculus cayanus Linn. *Syst. Nat.* 12th ed. i. p. 170, 1763 (Cayenne).

Pyrrhococcyx cyanus Cab. in Schomb. *Reis. Guian.* iii. p. 713, 1848

Piaya cayana Salvin, Ibis, 1886, p. 64 (Camacusa, Bartica Grove, Roraima); Shelley, Cat. B. Brit. Mus. xix. p. 373, 1891 (Bartica Grove, Camacusa); Beebe, Our Search for a Wilderness, p. 131, 1910 (Georgetown); Brabourne & Chubb, B. S. Amer. i. p. 151, no. 1481, 1912.

Adult. General colour above chestnut including the head, back, wings, and tail, the last tipped with white, the dividing portion inclining to black; chin, throat, fore-neck, and quill-lining pale cinnamon; breast, abdomen, and under wing-coverts ash-grey; under tail-coverts and lower aspect of tail black, the latter tipped with white.

Total length 438 mm., culmen 28, wing 149, tail 270, tarsus 34.

The specimen from which the description is taken was collected on the Supenaam River.

We have examined a series of specimens, both male and female, in the British Museum, and there does not seem to be any apparent difference between the male and female either in plumage or in measurements.

A juvenile example from the Ituribisi River still retains the minute white points to the tips of the feathers on the head and back, and the sheaths on the feathers below the eyes. The tail-feathers, which have only just begun to grow, are for the most part white and look quite conspicuous.

Breeding-season. Unknown in British Guiana.

Nest. It builds its nest in a thick bush (*Schomburgk*).

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Ituribisi River, Supenaam River, Abary River (*McConnell collection*); Bartica, Kamakusa (*Whitely*).

Extralimital Range. North Brazil, Venezuela.

Habits. Schomburgk states (Reis. Guian. iii. p. 713) that this bird is distributed all over British Guiana and is found in the woods, as also on the outskirts of woods, always in pairs and making itself "important" and conspicuous by uttering its loud call—which sounds like "tick-tick-tick." Its long tail is never still. It has a very light and easy flight, and moves about in the tangled trees with the utmost ease and quickness. It builds its nest in a thick bush. The "Warraus" call it *Pikamant*, and the "Macusis" *Pike*.

301. *Piaya melanogaster*.

BLACK-BELLIED CUCKOO.

Cuculus melanogaster Vieill. N. Dict. d'Hist. Nat. viii. p. 236, 1817 (Guiana).

Pyrrhococcyx brachypterus Cab. in Schomb. Reis. Guian. iii. p. 714, 1848.

Piaya melanogaster Salvin, Ibis, 1886, p. 64 (Bartica Grove, Camacusa, Merumé Mts.); Brabourne & Chubb, B. S. Amer. i. p. 152, no. 1489, 1912.

Piaya melanogastra Shelley, Cat. B. Brit. Mus. xix. p. 377, 1891 (Bartica Grove).

Adult male. Crown of head and lores lead-grey; back, wings, tail, throat, and upper breast chestnut, somewhat paler on the chin; flight-quills brown at the tips; the tail-feathers chestnut above and below broadly tipped with white, the intervening portion black; lower breast dusky; abdomen, flanks, under tail-coverts, and under wing-coverts black. "Bill red; legs and claws slate-colour; irides crimson" (*H. Whitely*).

Total length 355 mm., culmen 29, wing 135, tail 214, tarsus 33.

The male described was collected on the Kamakabra River.

Adult female. Similar to the adult male. Wing 132 mm.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Kamakabra River (*McConnell* collection); Bartica, Kamakusa, Merumé Mountains (*Whitely*).

Extralimital Range. Brazil, Eastern Peru, Ecuador.

Habits. According to Schomburgk (Reis. Guian. iii. p. 714) the habits and distribution of this bird are the same as those of *P. cayana* (p. 439). The "Warraus" call it *Pikatuapa*.

302. *Piaya rutila*.

LITTLE CUCKOO.

Cuculus rutilus Illig. Abh. Berl. Ak. Wiss. 1812, p. 224 (Cayenne).

Pyrrhococcyx minutus Cab. in Schomb. Reis. Guian. iii. p. 714, 1848.

Piaya minuta Salvin, Ibis, 1886, p. 64; Shelley, Cat. B. Brit. Mus. xix. p. 378, 1891 (British Guiana).

Piaya rutila Beebe, Our Search for a Wilderness, p. 131. 1910 (Georgetown); Brabourne & Chubb, B. S. Amer. i. p. 152, no. 1490, 1912.

Adult male. General colour pale chestnut, including the head, back, wings, tail, throat, and breast, somewhat darker on the tail and paler on the throat; flight-feathers brown at the tips; tail-feathers tipped with white inclining to black on the portion adjoining the white; lower aspect of tail chestnut and black; abdomen buff; thighs, vent, and under tail-coverts dark brown; under wing-coverts pale cinnamon.

Total length 257 mm., culmen 11, wing 106, tail 146, tarsus 27.

The male described was collected on the Bonasika River.

Adult female. Similar to the male. Wing 97 mm. "Eyes red; bill greenish yellow; legs and toes greenish brown; claws black" (*H. Whitely*).

The description of the female is taken from an example in the British Museum collected by Whitely on the Takutu River, January 3rd, 1888—Salvin-Godman collection.

There is a specimen from the Abary River which, I think, must be in the immature plumage. It is much duller and inclining to dusky above and below. Some of the tail-feathers lack the white tips.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Mount Roraima, Ituribisi River, Bartica, Bonasika River, Makauria River, Abary River (*McConnell* collection); Georgetown (*Beebe*).

Extralimital Range. Cayenne (*Illiger*), Trinidad, Venezuela, Colombia, Ecuador, Peru, Brazil.

Habits. Schomburgk states (*Reis. Guian.* iii. p. 714) that the mode of life and distribution of this species are the same as those of *P. brachypterus* (= *P. melanogaster*).

Genus **NEOMORPHUS** Gloger.

Neomorphus Gloger, in Froriep's Notizen, xvi. p. 278, 1827. Type *N. geoffroyi* (Temm.).

In this genus the primary-quills do not exceed the secondaries in length; culmen much compressed towards the base; feathers of the forehead encroach on the membrane that cover the nostrils, which assume the form of horizontal slits.



Bale & Danielson, Jld.

Neomorphus rufipennis.
Rufous-winged Cuckoo.

303. *Neomorphus rufipennis*.

RUFIOUS-WINGED CUCKOO.

(Plate IX.)

Cultrides rufipennis Gray, P. Z. S. 1849, p. 63, pl. x. (Guiana).*Neomorphus rufipennis* Cab. & Hein. Mus. Heine, iv. p. 92, note, 1862; Sel. P. Z. S. 1864, p. 249; id. op. cit. 1866, p. 60; Pelz. Orn. Bras. p. 272, 1871; Sel. & Salv. Nomencl. Av. Neotr. p. 107, 1873; Lawr. Ibis, 1873, pp. 292, 295; Salvin, Ibis, 1886, p. 63 (Camacusa); Shelley, Cat. B. Brit. Mus. xix. p. 418, 1891; Brabourne & Chubb, B. S. Amer. i. p. 153, no. 1494, 1912.

Adult. Head, hind-neck, and a broad band across the fore-neck blue-black, becoming more green on the back and upper wing-coverts; bastard-wing, primary-coverts, and quills blue-black, becoming purple on the secondaries, which are edged with dark red on the outer webs, as are also some of the greater coverts; lower back bronze-green; tail purple, the tips and outer feathers green with purple reflections, the outermost pair blue-black; throat and abdomen dusky grey; under tail-coverts blackish; lower aspect of tail blue-black.

Total length 500 mm., culmen 44, wing 160, tail 235, tarsus 75.

The bird described was collected on the Supenaam River.

Breeding-season. Unknown.*Nest.* Unrecorded.*Eggs.* Undescribed.

Range. Confined to British Guiana: Ituribisi River, Supenaam River, Mazuruni River (*McConnell collection*); Kamakusa (*Whitely*).

Habits. Unrecorded.Genus **TAPERA** Thunb.

Tapera Thunberg, Goth. K. Vet. Handl. 1819, p. (?), pl. (?). Type *T. nævia* (Linn.).

In this genus the upper tail-coverts are very long and reach to the middle of the tail; the bill is short, arched, and compressed; the tail-feathers are narrow.

304. *Tapera nævia*.

BROWN CUCKOO.

Cuculus nævius Linn. Syst. Nat. 12th ed. i. p. 170, 1766 (Cayenne).*Diplopterus galeritus* Cab. in Schomb. Reis. Guian. iii. p. 713, 1848.*Diplopterus nævius* Salvin, Ibis, 1886, p. 64 (Bartica Grove, Roraima);

Quelch, Timehri (2) v. p. 95, 1891 (Georgetown); Shelley, Cat. B. Brit. Mus. xix. p. 423, 1891 (Georgetown).
Tapera nævia Brabourne & Chubb, B. S. Amer. i. p. 153, no. 1496, 1912.

“Wife-sick” (*Quelch*).

Adult female. The feathers on the upper surface are black, fringed with chestnut on the head and greyish brown on the back; upper wing-coverts, and upper tail-coverts; bastard-wing black; the primary-coverts brown, becoming darker towards the tips; primary and secondary quills brown with more or less white at the base of the feathers, and black longitudinal lines on the innermost secondaries; tail-feathers earth-brown, the outer feathers with wavy dark bottle-green centres; a white eyebrow, which extends on to the sides of the nape; ear-coverts brown, a moustachial black streak; throat and under surface of body dull white washed with buff on the throat and under tail-coverts and grey on the chest. “Bill, upper mandible black and yellow, lower mandible grey; feet grey; iris greenish yellow.”

Total length 260 mm., culmen 17, wing 110, tail 152, tarsus 30.

The female from which the description is taken was collected on the Abary River.

Adult male. Similar to the adult female in the colour of the plumage. Wing 114 mm.

The immature bird differs from the adult in being more rusty brown on the upper surface, the tips of all the feathers edged with buff imparting a barred appearance; throat buff with dark cross-bars to the feathers; under tail-coverts similar, but the cross-bars absent.

The male bird described was collected on the Ituribisi River in August 1909.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Mount Roraima, Ituribisi River, Supenaam River, Bartica, Bonasika River, Abary River (*McConnell collection*); Georgetown (*Quelch*).

Extralimital Range. Cayenne (*Linne*), Colombia, Ecuador, Peru, Brazil, Paraguay, Argentina.

Habits. According to Schomburgk (*Reis. Guian.* iii. p. 713) this bird is found commonly on the outskirts of the woods

stretching along the coast and in the coffee-plantations, being always in pairs. Its flight is very buoyant, and it moves about in thick bushes with astonishing ease and alertness. It jerks its long tail and simultaneously utters its peculiar whistling note; it also utters its note when rising. Its food consists chiefly of insects. Schomburgk did not observe it nesting. The "Macusis" call it *Serimi*, and the "Arekunas" *Tetsch*.

Mr. J. J. Quelch observed this species in Georgetown, and remarks (Timehri (2) v. p. 95):—"Another common member of this family is the bird known as Wife-sick (*Diplopterus navius*). It feeds chiefly on insects, and it will often be noticed catching these on the ground or among the bushes."

Genus **DROMOCOCCYX** Wied.

Dromococcyx Wied, Beitr. Naturg. Bras. iv. p. 351, 1832. Type *D. phasianellus* (Spix).

Bill almost straight and not compressed; upper tail-coverts very long, almost reaching to the tip of the tail.

305. *Dromococcyx pavoninus*.

PEACOCK CUCKOO.

Dromococcyx pavoninus Pelz. Orn. Bras. p. 270, 1871 (Araguay); Salvin, Ibis, 1886, p. 64 (Roraima); Shelley, Cat. B. Brit. Mus. xix. p. 427, 1891; Brabourne & Chubb, B. S. Amer. i. p. 153, no. 1498, 1912.

Adult male. General colour above glossy black or brown, the feathers margined with white on the back, scapulars, and upper wing-coverts, also the short upper tail-coverts; the long upper tail-coverts tipped with white, as are also the tail-feathers; primary-quills somewhat paler on the edges of the outer webs, and a white spot towards the base on the inner webs of the three outer feathers; head, throat, and fore-neck nut-brown, inclining to rufous on the nape and white on the middle of the throat; a buff line from behind the eye extending on to the sides of the nape; remainder of the under surface white with a greyish tinge on the breast; lower aspect of the tail-feathers grey, becoming darker towards the tips, which are white.

Total length 292 mm., culmen 23, wing 135, tail 169, tarsus 34. The male described was collected on the Bonasika River.

Adult female. Similar to the adult male. Wing 130 mm.

The immature birds differ from the adult in being dusky brown above with no white edgings to the feathers; the head is like the back; throat also dusky brown but paler than the top of the head, and the greater upper wing-coverts have buff shaft-streaks.

The female and immature birds described are in the British Museum and were collected by Whitely at Mount Roraima in January 1882 and June 1883—Salvin-Godman collection.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Supenaam River, Bonasika River, Makauria River, Abary River, Berbice River (*McConnell collection*).

Extralimital Range. Northern Brazil.

Genus **CROTOPHAGA** Linn.

Crotophaga Linné, Syst. Nat. 10th ed. i. p. 105, 1758. Type *C. ani* Linn.

The members of this genus have eight tail-feathers, the bill much compressed, the culmen very thin and elevated above the fore part of the head, no crest on the head, and the general colour black.

Key to the Species.

- | | |
|---|---------------------------|
| A. Smaller, wing less than 170 mm.; tail less than 190 mm. | <i>C. ani</i> , p. 446. |
| B. Larger, wing more than 170 mm.; tail more than 190 mm. | <i>C. major</i> , p. 447. |

306. *Crotophaga ani*.

COMMON ANI.

Crotophaga ani Linn. Syst. Nat. 10th ed. i. p. 105, 1758 (Brazil); Cab. in Schomb. Reis. Guian. iii. p. 713, 1848; Salvin, Ibis, 1886, p. 63 (Bartica Grove); Shelley, Cat. B. Brit. Mus. xix. p. 429, 1891 (Bartica Grove); Lloyd Price, Timehri (2) v. p. 63, 1891 (habits); Quelch, tom. cit. p. 94 (habits); Beebe, Our Search for a Wilderness, p. 131 (Georgetown), p. 253 (Matope), 1910; Brabourne & Chubb, B. S. Amer. i. p. 153, no. 1499, 1912.

Crotophaga rugirostra Cab. in Schomb. Reis. Guian. iii. p. 713, 1848.

? *Crotophaga sulcirostris* Salvin, Ibis, 1886, p. 63.

“Old Witch” or “Jumby Bird” (*Lloyd Price*).

Adult female. Dull black above and below with blue reflections on the quills and tail-feathers, and paler metallic margins to the feathers on the fore-neck, sides of neck, hind-neck, mantle, and upper wing-coverts.

Total length 330 mm., culmen 29, wing 150, tail 168, tarsus 35.

The female described was collected on the Abary River.

Adult male. Similar to the adult female. Wing 154 mm.

Breeding-season. Unknown in British Guiana.

Nest. "In the thick pimpler bushes the nest may be found composed of dry sticks loosely put together" (*Lloyd Price*).

Eggs. "The eggs when laid are covered with a loose chalky substance, like fine powder, but when this is scraped off, they are of a beautiful blue, which, however, quickly fades when subjected to a strong light" (*Lloyd Price*).

Range in British Guiana. Mount Roraima, Upper Takutu Mountains, Bonasika River, Abary River (*McConnell collection*); Bartica (*Whitely*); Matope, Georgetown (*Beebe*).

Extralimital Range. South America to Argentina, West India Islands and Central America to the Southern United States of North America.

Habits. Schomburgk writes (*Reis. Guian. iii. p. 713*) that this bird is more often found near the coast in the outskirts of light woods, and in the proximity of cattle herds.

Mr. Lloyd Price writes (*Timehri* (2) v. p. 63):—"In the thick pimpler bushes the nest of the Old Witch or Jumby Bird (*Crotophaga ani*) may be found composed of dry sticks, loosely put together. Several of these birds make use of the same nest, ten to fourteen eggs being frequently found. The eggs when laid are covered with a loose chalky substance, like fine powder, but when this is scraped off, they are of a beautiful blue, which, however, quickly fades when subjected to a strong light."

Mr. J. J. Quelch remarks (*Timehri* (2) v. p. 94):—"These birds live in large flocks and build their nests together gregariously, frequenting the pastures and roads as well as the low bush, especially where cattle are kept, in search of larvæ and other insects. The flesh of these birds, owing to an unpleasant flavour, is not considered good for the table; though it is used among the older black creoles as a medicine for those subject to fits, for whom it is supposed to be extremely beneficial."

We quote the following notes from Mr. Beebe (*Our Search*

for a Wilderness, pp. 49, 157) :— “Anis blundered along looking as if their wings and tails were too loosely attached for use.”

“Smooth-billed Ani—these aberrant Cuckoos are most interesting birds, and several females are said to combine, building a single hollow nest of sticks in which the eggs are hatched.”

307. *Crotophaga major*.

GREAT ANI.

Crotophaga major Gmel. Syst. Nat. i. p. 363, 1788 (Cayenne); Cab. in Schomb. Reis. Guian. iii. p. 712, 1848; Brown, Canoe and Camp Life, p. 152, 1876 (Rewa River); Salvin, Ibis, 1886, p. 63; Lloyd Price, Timehri (2) v. p. 63, 1891 (habits); Quelch, tom. cit. p. 94 (Georgetown); Shelley, Cat. B. Brit. Mus. xix. p. 428, 1891 (Aunai); Beebe, Our Search for a Wilderness, p. 131 (Georgetown), p. 156 (Waini), 1910; Brabourne & Chubb, B. S. Amer. i. p. 153, no. 1500, 1912.

“King-Witch” (*Lloyd Price*); “Big Witch” or “Jumbie Bird” (*Beebe*).

Adult male. General colour above and below blue-black with green and purple reflections; the feathers on the mantle, upper wing-coverts, and breast edged with bronze-green; the feathers on the head, sides of face, and throat narrow and pointed.

Total length 470 mm., culmen 49, wing 200, tail 235, tarsus 47.

The male described was collected on the Abary River.

Adult female. Like the adult male. Wing 196 mm.

Breeding-season. Unknown in British Guiana.

Nest. “The nest is built in the densest bush, and is not often found” (*Lloyd Price*).

Eggs. “The eggs when scraped are of the same rich blue” (*Lloyd Price*).

Range in British Guiana. Abary River, Upper Takutu Mountains, Supenaam River, Bartica (*McConnell collection*); Rewa River (*Brown*); Annai (*Whitely*); Georgetown, Waini (*Beebe*).

Extralimital Range. Trinidad, Venezuela, Colombia, Ecuador, Peru, Brazil.

Habits. According to Schomburgk (Reis. Guian. iii. p. 712) this bird lives on the outskirts of the woods, in the oasis or the wooded borders of the Savanna rivers, and usually in flocks. Small colonies of nests are found in low thorny bushes.

Mr. Lloyd Price remarks (Timehri (2) v. p. 63) :—" Another and much larger species of this bird, called the King-Witch (*Crotophaga major*), is sometimes met with. The nest is built in the densest bush, and is not often found. The eggs when scraped are of the same rich blue. These birds have a curiously shaped bill, somewhat like the keel of a boat."

Mr. J. J. Quelch observed this species at Georgetown, and remarks (Timehri (2) v. p. 103) :—"Very common on the outskirts of the town. They are seldom seen more than two together, not on the ground, but in the high trees and tall shrubs. The flesh of these birds, owing to an unpleasant flavour, is not considered good for the table; though it is used among the older black creoles as a medicine for those subject to fits, for whom it is supposed to be extremely beneficial."

Mr. Barrington Brown writes (Canoe and Camp Life, p. 152) :—" A large kind of Old Witch bird, very numerous in the low trees growing along the river's edge. They fed on grasshoppers and caterpillars, ferreted out from amongst the tree leaves, and produced bubbling sounds now and then, like that made by the boiling of a pot of water."

We quote the following note from Mr. W. Beebe (Our Search for a Wilderness, p. 156) :—"Quite high in the air, clear of the tops of the tallest trees, we saw a black cloud of birds approaching. We soon made them out to be Greater Anis, or as the natives called them 'Big Witch' or 'Jumbie Birds.' When first seen they were in a dense compact mass heading straight toward us. Their flight was uniform, each bird giving three to six flaps and then sailing ahead for several seconds. Hundreds doing this at once made the sight a most striking one, while it was enhanced by their long, wedge-shaped tails, high arched beaks, bright yellow eyes, and the iridescence of their dark plumage as the slanting rays of the sun struck them."

Order SCANSORES.

Family CAPITONIDÆ.

The Barbets are birds of small size, and many of them have bright colours. The peculiar formation of their bills and rictal bristles appear to be the chief characters which distinguish them

from all other birds. They are distributed chiefly in Africa and Asia, and two genera and twenty-two species occur in Central and South America, one of which is represented in British Guiana.

(Genus **CAPITO** Vieill.

Capito Vieillot, Anal. nouv. Orn. p. 27, 1816. Type *C. niger* (P. L. S. Müll.).

The members of this genus have ten tail-feathers, like all other Barbets, and are distinguished by having the lateral feathers shorter than the middle ones.

308. **Capito niger.**

BLACK-SPOTTED BARBET.

Bucco niger P. L. S. Müll. Syst. Nat. Suppl. p. 89, 1776 (Cayenne).

Capito niger Salvin, Ibis, 1886, p. 66 (Camacusa, Bartica Grove, Atapurau River); Shelley, Cat. B. Brit. Mus. xix. p. 111, 1891 (Bartica Grove, Atapurau River); Brabourne & Chubb, B. S. Amer. i. p. 154, no. 1508, 1912.

Capito cayennensis Cab. in Schomb. Reis. Guian. iii. p. 720, 1848.

Adult male. Upper surface black, including the sides of the face, sides of neck, hinder crown, hind-neck, mantle, back, wings, and tail with a yellowish-white band across the greater upper wing-coverts, and another on the sides of the crown; some of the feathers on the mantle are fringed with yellowish white; the feathers on the crown golden-yellow with dark bases; forehead and throat-patch bright red; breast and abdomen straw-yellow with obsolete brown spots on the under tail-coverts and ovate black spots on the flanks; under wing-coverts yellowish white, as are also the inner edges of the quills.

Total length 164 mm., culmen 21, wing 80, tail 46, tarsus 24.

The male from which the description is taken was collected on the Mazaruni River.

Adult female. Differs from the adult male in having the lower throat and breast thickly spotted with black, and in being broadly streaked with the same colour on the sides of the body.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Supenaam River, Bartica, Makauria River, Anarika River, Mazaruni River, Arwye River, Arawai River, Tiger Creek (*McConnell collection*); Kama-kusa, Bartica, Kamarang River, Ourunei (*Whitely*); Kumaka (*Schomburgk*).

Extralimal Range. Cayenne (*P. L. S. Müller*), Venezuela.

Habits. Schomburgk mentions (*Reis. Guian.* iii. p. 720) this bird as being lively, living in small companies, and continually roaming through the open woods. He met with large numbers near Kumaka; after that only small numbers were seen. Its favourite haunt was the cecropia tree, which grew near the villages, and where sixteen to twenty individuals every morning, in company with other birds, hunted for insects in the most alert manner—these last being their staple food.

Family RAMPHASTIDÆ.

The Toucans are among the largest of the Picariæ in the New World, and are distinguished from all others of this group in the Western Hemisphere by the large size and peculiar shape of their bills, which vary in length from about nine inches in the longer to about two inches in the smaller ones. The wings are fairly long. The tail in some is short and square, while in others it is long and graduate. The legs are short, and the feet are zygodactyle—having two toes in front and two behind.

The family consists of five genera and about sixty species, all of which are confined to Central and South America—from Mexico to Argentina. Four genera and nine species are represented in British Guiana. The Toucans, like the Woodpeckers, usually nest in hollow trees.

Genus RAMPHASTUS Linn.

Ramphastos Linné, *Syst. Nat.* 10th ed. i. p. 103, 1758. Type *R. piprivorus* (Linn.).

The members of this genus are distinguished by their larger size, large bills, black plumage, short, square, or slightly rounded tails, and by having the nostrils placed at the back of the casque. The first and second primaries are incised.

*Ramphastus toco.*

Fig. 92.—To show the position of the nostrils (x).

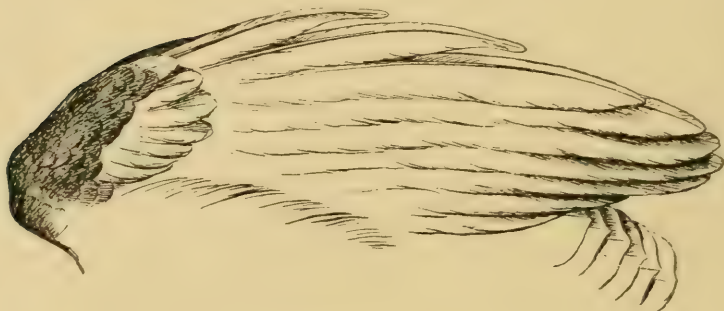
*Ramphastus toco.*

Fig. 93.—To illustrate the two outer primary-quills, which are incised.

Key to the Species.

- | | |
|---|--|
| A. Throat and fore-neck white. | |
| <ul style="list-style-type: none"> a. Upper tail-coverts white; a faint narrow band of pink on the breast dividing the white of the fore-neck from the black breast b. Upper tail-coverts lemon-yellow; a wide band of red across the fore-neck separating the black breast from the white of the fore-neck | <ul style="list-style-type: none"> <i>R. toco</i>, p. 453. <i>R. monilis</i>, p. 454. |
| B. Throat and fore-neck yellow or orange. | |
| <ul style="list-style-type: none"> c. Upper tail-coverts orange d. Upper tail-coverts red..... | <ul style="list-style-type: none"> <i>R. osculans</i>, p. 455. <i>R. vitellinus</i>, p. 456. |

309. *Ramphastus toco*.

TOCO TOUCAN.

Ramphastos toco P. L. S. Müll. Syst. Nat. Suppl. p. 82, 1776 (Cayenne); Cab. in Schomb. Reis. Guian. iii. p. 721, 1848; Brown, Canoe and Camp Life, p. 4, 1876 (Cuyuni River); Salvin, Ibis, 1886, p. 65; Quelch, Timehri (2) ii. p. 355, 1888 (Tiger Island); Selater, Cat. B. Brit. Mus. xix. p. 124, 1891 (British Guiana); Brabourne & Chubb, B. S. Amer. i. p. 156, no. 1523, 1912.

? Red-breasted Toucan, Beebe, Our Search for a Wilderness, p. 275 (Hoorie Creek), 1910.

“Toco bill-bird” (*Quelch*).

Adult male. General colour above and below black; upper tail-coverts, cheeks, throat, and fore-neck white, the last tinged with yellow, and a faint pink band on the edge dividing the black of the breast; under tail-coverts red.

Total length 590 mm., culmen 196, from gape 182, wing 242, tail 146, tarsus 53.

Adult female. Similar to the adult male. Wing 237 mm.

The male from which the description is taken was collected on the Abary River, and the female at Miritiba, N.E. Brazil. The latter is in the collection at the British Museum.

Breeding-season. Unknown in British Guiana.

Nest. It nests in holes of trees (*Schomburgk*).

Eggs. It lays two white eggs (*Schomburgk*).

Range in British Guiana. Upper Takutu Mountains, Abary River (*McConnell* collection); Savannas (*Schomburgk*); Cuyuni River (*Brown*); Hoorie River (*Beebe*); Tiger Island (*Quelch*).

Extralimital Range. Cayenne (*P. L. S. Müller*), Brazil, Bolivia, Paraguay, Argentina.

Habits. Schomburgk states (Reis. Guian. iii. p. 721) that he only observed this bird on the Savannas, where it lives in pairs or small flocks in the oasis or the wooded banks of the rivers. It often flies over the open Savannas in search of the ripe psidium fruit (*cfr.* vol. ii. p. 183). It is supposed by the Indians that it is a reliable barometer or weather prophet, as it always utters its whistling call just before the rain. It is a shy bird and difficult to approach, but it becomes very tame in captivity. It has been known to eat flesh and fish in confinement, but has never, as Gould says in his Monograph, been known to catch fish, small birds, or reptiles in free life. Its favourite food is capiscum fruits. It nests in holes in trees and lays two white eggs. Young birds soon attain

the adult plumage, but the colour of the bill is obtained in the second or third year. Its flesh is considered to be good for eating. The "Macusis" call it *Curawcui* and the "Warraus" *Haritya*.

Mr. J. J. Quelch gives the following note (Timehri (2) ii. p. 355):—The Toco bill-bird (*Ramphastos toco*) having an inordinately long and indescribably rich orange-coloured bill, with a large ovoid black patch at the tip, occurs together with the common red-billed species (*R. erythrorhynchus*). They are, however, very shy, and very difficult to obtain on Tiger Island.

310. *Ramphastos monilis*.

RED-BILLED TOUCAN.

Ramphastos monilis P. L. S. Müll. Syst. Nat. Suppl. p. 82, 1776 (Cayenne); Brabourne & Chubb, B. S. Amer. i. p. 156, no. 1527, 1912.

Ramphastos erythrorhynchus Cab. in Schomb. Reis. Guian. iii. p. 722, 1848; Salvin, Ibis, 1886, p. 64 (Bartica Grove, Camacusa, Merumé Mts., Roraima); Quelch, Timehri (2) ii. p. 365, 1888 (Abary River); Selater, Cat. B. Brit. Mus. xix. p. 128, 1891 (Carimang River); Beebe, Our Search for a Wilderness, p. 174 (Hoorie Creek), p. 268 (Aremu River), 1910.

Adult female. Upper and under surface black; upper tail-coverts lemon-yellow intermixed with red; cheeks, throat, and fore-neck white; under tail-coverts and a wide band across the breast red.

Total length 550 mm., culmen 179, from gape 162, wing 233, tail 155, tarsus 53.

The female described was collected on the Mazaruni River.

Adult male. Similar to the adult female. Wing 237 mm.

The description of the male is taken from an example in the British Museum collected by Whitely on the Kamarang River, November 27th, 1885.

Breeding-season. Unknown in British Guiana.

Nest. It builds its nest in holes in trees (*Schomburgk*).

Eggs. It lays two white eggs (*Schomburgk*).

Range in British Guiana. Mazaruni River, Cotinga River (*McConnell* collection); Mount Roraima, Merumé Mountains, Kamakusa, Kamarang River (*Whitely*); Abary River (*Quelch*); Hoorie River, Aremu River (*Beebe*).

Extralimital Range. Cayenne (*P. L. S. Müller*), Venezuela, North and North-east Brazil.

Habits. According to *Schomburgk* (Reis. Guian. iii. p. 722)

this bird is common throughout British Guiana. Only rare near the coast, and especially common in dense woods. Its food consists of fruits; when it has satisfied its hunger it rests on the topmost branches of tall trees and at intervals utters its whistling note. It appears to live chiefly in pairs, but sometimes small companies were seen, especially on a tree full of ripe fruit. It builds its nest in holes in trees and lays two white eggs. It is often kept as a pet by the natives (*cf.* vol. ii. p. 390). When hopping on the ground it appears similar to the European Magpie. Schomburgk also states that neither in confinement nor in free life had he seen it throw its food into the air and catch it again. It is very much hunted by the Indians for its beautiful plumage (*cf.* vol. i. p. 403). Its flesh is edible. It often makes a rattling noise with its bill and bites anyone who may be near it at the time. It is also regarded as a sure weather prophet by the natives. The "Warraus" call it *Ahaesimu* and the "Macusis" *Cuyakeh*.

Mr. J. J. Quelch remarks (Timehri (2) ii. p. 365) that the common red-billed species (*R. erythrorhynchus*) occurs on the Abary River. It is, however, very shy and was difficult to obtain.

Mr. Beebe writes as follows (Our Search for a Wilderness, p. 174):—"The notes of the Red-billed Toucans are like the yapping of a puppy, uttered in pairs and differing slightly, thus, 'yap! yip! yap! yip!' The great mandibles are opened and thrown upward at each utterance."

He also writes (*op. cit.* p. 326):—"The colouring of their beaks was wonderfully brilliant and variegated. Their notes were of the Robin-song type, 'phéopha'! although the resemblance to the puppy's voice was also strong. They had been feeding on seeds with a pinkish pulp which Francis called *suluwafaddy*."

311. *Ramphastus osculans*.

OSCULANT TOUCAN.

Ramphastos osculans Gould, P. Z. S. 1835, p. 156 (Brazil); Cab. in Schomb. Reis. Guian. iii. p. 723, 1848; Salvin, Ibis, 1886, p. 65; Selater, Cat. B. Brit. Mus. xix. p. 131, 1891 (British Guiana); Brabourne & Chubb, B. S. Amer. i. p. 156, no. 1532, 1912.

Adult. Crown of head, hind-neck, and mantle velvety-black; back, wings, and tail glossy black; upper tail-coverts lemon-yellow, whitish at the base and orange at the tips; cheeks, sides of neck, and throat white; lower throat orange-yellow; breast

and under tail-coverts crimson ; abdomen and under wing-coverts dull black.

Total length 480 mm., culmen 136, from gape 125, wing 197, tail 154, tarsus 50.

This species is not represented in the Mc'onnell collection, and the description is taken from a specimen in the collection at the British Museum.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Unrecorded.

Extralimital Range. Cayenne, North Brazil.

Habits. According to Schomburgk (Reis. Guian. iii. p. 722) the mode of life and distribution are the same as those of *R. vitellinus*, see below.

We have Schomburgk's authority only for the occurrence of this species in British Guiana.

312. *Ramphastus vitellinus*.

SULPHUR-AND-WHITE-BREASTED TOUCAN.

Ramphastos vitellinus Licht. Verz. Doubl. p. 70, 1823 (Cayenne); Cab. in Schomb. Reis. Guian. iii. p. 722, 1848; Brown, Canoe and Camp Life, p. 291, 1876 (Cotinga River); Salvin, Ibis, 1886, p. 65 (Camacusa, Bartica Grove); Selater, Cat. B. Brit. Mus. xix. p. 132, 1891; Beebe, Our Search for a Wilderness, p. 174, 1910 (Hoorie Creek); Brabourne & Chubb, B. S. Amer. i. p. 157, no. 1535, 1912.

"Toucans" or "Bill-Birds" (*Brown*).

Adult female. General colour above and below black; upper and under tail-coverts red, as is also a broad band across the breast; cheeks, sides of neck, and upper throat white, a narrow band of lemon-yellow across the upper breast dividing the red from the orange on the fore-neck.

Total length 520 mm., culmen 133, from gape 126, wing 197, tail 165, tarsus 48.

The female from which the description is taken was collected on the Berbice River.

Adult male. Similar in the colour of the plumage to that of the adult female. Wing 208 mm.

The male described is in the British Museum and was collected by Whitely on the Kamarang River in November 1885—Salvin-Godman collection.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Berbice River (*McConnell collection*); Humerida Mountains (*Schomburgk*); Cotinga River (*Brown*); Kamakusa, Bartica, Kamarang River (*Whitely*); Hoorie River (*Beebe*).

Extralimital Range. Cayenne (*Licht.*), Trinidad, Venezuela, North Brazil.

Habits. According to Schomburgk (*Reis. Guian.* iii. p. 722) the habits and mode of life of this bird are the same as those of *R. erythrorhynchus* (= *R. monilis*, p. 454). The "Macusis" call it *Kirima* and the "Warraus" *Harialiapi*.

Schomburgk also states (*Reis. Guian.* iii. p. 722) that he only saw one specimen of this species and that was when he was ascending the Humerida Mountains (*cf.* vol. ii. p. 214). In colour it was almost identical with *R. vitellinus*, but the bill was almost the same colour as that of *R. erythrorhynchus* (= *R. monilis*).

Mr. Barrington Brown writes (*Canoe and Camp-life*, p. 291):—"The small Toucans or Bill-birds are also fond of uttering their yelping calls of an evening, or during the day on the approach of a shower. When doing so they bob their heads up and down in a most extraordinary manner, with their large bills pointed upwards."

Mr. Beebe observes (*Our Search for a Wilderness*, p. 174):—"The brilliant white-breasted birds call loudly 'kiok! kiok!' in a high shrill tone very unlike that of their fellows."

Genus **PTEROGLOSSUS** Illig.

Pteroglossus Illiger, *Prodr. Syst. Mamm. et Av.* p. 202, 1811. Type *P. araçari* (Linn.).

The chief differences which distinguish this genus from *Ramphastus* are the smaller size, diverse coloration, graduated tail, and in having the nostrils placed on the hinder portion of the casque on each side of the culminal ridge, which is broad and rounded.

Key to the Species.

- | | |
|--|--------------------------------|
| A. Larger, wing more than 130 mm.; abdomen yellow with a red band across the middle; thighs rust-brown | <i>P. roraimæ</i> , ♂, p. 458. |
| a. Crown of head, sides of face, and throat black like the male | <i>P. roraimæ</i> , ♀, p. 458. |

- B. Smaller, wing less than 130 mm.; abdomen uniform yellow, no red cross-band; thighs green..... *P. viridis*, ♂, p. 459.
 b. Crown of head, sides of face, and throat chestnut in contrast to the male..... *P. viridis*, ♀, p. 459.

313. *Pteroglossus roraimæ*.

MOUNT RORAIMA ARACARI.

Pteroglossus roraimæ Brabourne & Chubb, Ann. & Mag. Nat. Hist. (5) x. p. 261, 1912 (Mount Roraima); iid. B. S. Amer. i. p. 157, no. 1544, 1912.

Pteroglossus aracari (nec Linn.), Cab. in Schomb. Reis. Guian. iii. p. 720, 1848; Salvin. Ibis. 1886, p. 65 (Bartica Grove); Slater, Cat. B. Brit. Mus. xix. p. 138, 1891 (Demerara).

? *Pteroglossus torquatus* Beebe (nec Gmel.), Our Search for a Wilderness, p. 174, 1910.

Adult male. Head, throat, and neck all round glossy black; upper back, wings, and tail bronze-green; inner webs of quills brown with pale edges; lower back and rump deep red; breast and abdomen citron-yellow divided by a broad band of scarlet; thighs dusky brown; under tail-coverts like the abdomen, but in some specimens mixed with red; under wing-coverts whitish; lower mandible and ridge of culmen black, remainder of upper mandible white.

Total length 450 mm., bill from gape 116, wing 154, tail 153, tarsus 37.

The description of the male is taken from an example collected by Mr. McConnell at Mount Roraima in October 1898, and is the type of the species.

Adult female. Similar in the colour of the plumage to the adult male. Wing 149 mm.

The female from which the description is taken is in the British Museum, and was collected by Whitely at Bartica on December 16th, 1880—Salvin-Godman collection.

Breeding-season. Unknown in British Guiana.

Nest. It nests in holes in trees (*Schomburgk*).

Eggs. It lays two eggs (*Schomburgk*).

Range in British Guiana. Mount Roraima (type of the species), Ituribisi River, Supenaam River (*McConnell collection*); Bartica (*Whitely*).

Extralimital Range. Venezuela.

Habits. According to Schomburgk (Reis. Guian. iii. p. 720)

this bird was fairly common in British Guiana. It was found in the woods, singly, in pairs, or in small companies, and on trees with ripe fruit. When a flock was disturbed the individuals dispersed in pairs. It lived entirely on fruit, nested in holes in trees, and laid two eggs. Its flesh was good for food. The natives often kept it in confinement, when it became very tame. Its call was like the word kulik-kulik. The "Warraus" called it *Teifari* and the "Macusis" *Parupari*.

Mr. Beebe (Our Search for a Wilderness, p. 174) remarks:—"In the evening on the stroke of seven, the first-comers would arrive—a trio of Black-banded Aracaris which alight and preen their feathers. These may remain quiet for about twenty minutes, but more often take to flight at the approach of a screaming flock of eight or ten Mealy Amazon Parrots which scatter over the branches."

314. *Pteroglossus viridis*.

GREEN ARACARI.

Ramphastos viridis Linn. Syst. Nat. 12th ed. i. p. 150. 1766 (Cayana).

Pteroglossus viridis Cab. in Schomb. Reis. Guian. iii. p. 720. 1848;

Salvin, Ibis, 1886, p. 65 (Bartica Grove, Camacusa); Selater, Cat.

B. Brit. Mus. xix. p. 147, 1891; Brabourne & Chubb, B. S. Amer.

i. p. 159, no. 1561, 1912.

Adult male. Back, wings, and tail dark green; short upper tail-coverts red; head, throat, and neck all round glossy black; remainder of under surface straw- or sulphur-yellow; hinder aspect of thighs green, front portion buff. Bill: upper mandible orange-yellow with a longitudinal black line; lower mandible black with a red basal line; legs and toes olive-green, claws black."

Total length 344 mm., bill from gape 81, wing 120, tail 110, tarsus 29.

Adult female. Differs from the adult male in having the head and neck chestnut instead of black. Wing 118 mm.

The male and female described were collected on the Ituribisi River.

Breeding-season. Unknown in British Guiana.

Nest. It nests in holes in trees (*Schomburgk*).

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River (*McConnell* collection); Kanuku Mountains (*Schomburgk*); Bartica, Kamakua (*Whately*).

Extralimital Range. Cayenne (Linné), North Brazil.

Habits. Schomburgk states (Reis. Guian. iii. p. 720) that he found this bird common near the Kanuku Mountains, where it was usually met with in pairs or in small flocks. It nested in holes in trees and its habits were similar to those of the other species of Toucans. The "Warraus" called it *Yahi* and the "Macusis" *Karajari*.

Genus **SELENIDERA** Gould.

Selenidera Gould, Icon. Av. pt. i. text to pl. 7, 1837. Type *S. gouldi* Natterer.

This genus is distinguished by having a shorter bill, the nostrils rounded, the ridge of the culmen narrow and keeled, and the sexes different in colour.

Key to the Species.

- A. Culmen from anterior portion of nostril to the tip of the bill more than 55 mm.; bill for the most part uniform black; tail broadly tipped with chestnut *S. culik*, ♂, p. 460.
 - a. Crown of head black; throat, breast, and abdomen grey *S. culik*, ♀, p. 460.
- B. Culmen from anterior portion of nostril to the tip of the bill less than 55 mm.; bill particoloured; tail narrowly tipped with chestnut *S. nattereri*, ♂, p. 461.
 - b. Crown of head rufous like the throat, breast, and abdomen *S. nattereri*, ♀, p. 461.

315. *Selenidera culik*.

GUIANA TOUCANET.

Pteroglossus culik Wagler, Syst. Av. *Pteroglossus* sp. 10, 1827 (Cayenne).

Pteroglossus piperivorus (nec Linn.), Cab. in Schomb. Reis. Guian. iii. p. 721, no. 252, 1848 (Canuku Mts.).

? *Pteroglossus inscriptus* Cab. tom. cit. p. 721, no. 253 (Canuku Mts.).

? *Pteroglossus pluricinctus* Cab. tom. cit. p. 721, no. 254.

Selenidera piperivora (nec Linn.), Salvin, Ibis, 1886, p. 66 (Bartica Grove, Camacusa, Merumé Mts., River Atapurau); Selater, Cat. B. Brit. Mus. xix. p. 152, 1891 (Demerara).

Selenidera culik Brabourne & Chubb, B. S. Amer. i. p. 159, no. 1659, 1912.

Adult male. Back, wings, and tail dark green; tips of tail-feathers chestnut: top of head, neck all round, throat, breast, and

upper abdomen glossy black; ear-coverts yellow; a collar round the hind-neck golden-yellow; lower abdomen green intermixed with yellow; under tail-coverts bright red; thighs chestnut; under wing-coverts whitish.

Total length 335 mm., bill from gape 76, wing 120, tail 104, tarsus 33.

The male described was collected on the Ituribisi River.

Adult female. Differs from the adult male in the absence of the glossy black throat and breast, and in having a broad chestnut nuchal collar; throat, breast, and sides of neck grey. Wing 114 mm.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Supenaam River (*McConnell collection*); Kanuku Mountains (*Schomburgk*); Bartica, Kamakusa, Merumé Mountains, Kamarang River (*Whiteley*).

Extralimital Range. North-east Brazil.

Habits. Schomburgk states (*Reis. Guian.* iii. p. 721, no. 252) that he found this bird common in the Kanuku Mountains, where it was met with in small companies. Its habits are the same as those of the other species of Toucans. The "Macusis" call it *Paripari*.

Schomburgk also states (*Reis. Guiana*, iii. p. 721, no. 253) that this bird lives, as the preceding species (= *S. culik*), in small flocks on the Kanuku Mountains.

Schomburgk also remarks (*Reis. Guian.* iii. p. 721, no. 254) that the mode of life of this species is the same as that of the preceding (= *S. culik*).

316. *Selenidera nattereri*.

NATTERER'S TOUCANET.

Pteroglossus nattereri Gould, P. Z. S. 1835, p. 157 ("Brasilia"); Cab. in Schomb. *Reis. Guian.* iii. p. 721, no. 255, 1848.

Selenidera nattereri Salvin, *Ibis*, 1886, p. 66; Selater, *Cat. B. Brit. Mus.* xix. p. 151, 1891 (British Guiana); Brabourne & Chubb, *B. S. Amer.* i. p. 159, no. 1568, 1912.

? *Pteroglossus bitorquatus* Cab. in Schomb. *Reis. Guian.* iii. p. 721, no. 256, 1848 (Canuku Mts.).

Adult male. Head, hind-neck, throat, breast, and middle of abdomen glossy black; back, wings, and tail yellowish olive-green; a yellow, or orange collar on the lower hind-neck, like the cheeks

and ear-coverts, and a patch on each side of the abdomen ; thighs, lower flanks, and tips of tail-feathers chestnut ; under tail-coverts for the most part red ; under wing-coverts lemon-yellow like the inner edges of the quills on the under surface.

Total length 315 mm., bill from gape 70, wing 135, tail 107, tarsus 32.

Adult female. Differs from the adult male in having the head, hind-neck, throat, breast, and abdomen chestnut instead of black. Wing 127 mm.

This species is not represented in the McConnell collection, and the descriptions are taken from specimens in the British Museum said to have been collected in British Guiana by Schomburgk—Gould collection.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Kanuku Mountains (*Schomburgk*).

Extralimital Range. Cayenne, Venezuela, and North-west Brazil.

Habits. Schomburgk states (*Reis. Guian.* iii. p. 721, no. 255) that he found this species in the Kanuku Mountains and the woods near the coast, where it was generally in pairs. The "Macusis" call it *Kamata*, the "Warraus" *Wabacktsebeh*, and the "Paravilhanos" *Maniata*.

According to Schomburgk (*Reis. Guian.* iii. p. 721, no. 256) the habits and distribution of this bird are the same as those of the preceding species (= *S. nattereri*).

Genus **AULACORHAMPHUS** Gray.

Aulacorhamphus Gray, List Gen. B. p. 50, 1840. Type *A. sulcatus* (Swains.).

In this genus the sexes are of the same colour of plumage, the nostrils are elongated, and the ridge of the culmen is flattened.

317. **Aulacorhamphus whitelyanus.**

WHITELY'S ARACARI.

Aulacorhamphus whitelyanus Salvin & Godman, Ibis, 1882, p. 83 (Merumé Mts.); Salvin, Ibis, 1886, p. 66 (Roraima, 3000 to

3700 ft.); Selater, Cat. B. Brit. Mus. xix. p. 156, 1891; Brabourne & Chubb, B. S. Amer. i. p. 160, no. 1575, 1912.

? *Pteroglossus sulcatus* (nec Swains.), Cab. in Schomb. Reis. Guian. iii. p. 721, no. 257, 1848.

Adult female. General colour above and below green; chin and throat grey tinged with green; middle tail-feathers tipped with chestnut. "Eye reddish-hazel; cere purple; legs and toes bluish-green; claws dark horn-colour" (*H. Whitely*).

Total length 285 mm., bill from gape 57, wing 110, tail 95, tarsus 31.

The description of the female is taken from an example which was collected at Quonga in October 1887.

Adult male. Similar in colour to the adult female. Wing 114 mm.

The male described is in the British Museum and was collected at Quonga by Whitely on the 11th of November, 1887—Salvin-Godman collection.

We have examined the type of this species in the British Museum, which appears, by the smallness of its bill and the absence of notches on the cutting-edges of the upper mandible, to be an immature bird.

Breeding-season. Unknown.

Nest. Unrecorded.

Eggs. Undescribed.

Range. Confined to British Guiana: Quonga, collected by Whitely (*McConnell collection*); Kanuku Mountains (*Schomburgk*); Merumé Mountains, Mount Roraima, 3000 to 3700 ft., Quonga (*Whitely*).

Habits. Schomburgk states (Reis. Guian. iii. p. 721) that he observed this bird in small companies in the Canuku Mountains, and that its habits are the same as those of other species of Toucans.

Order PICIFORMES.

Family GALBULIDÆ.

The Jacamars are birds of rather small size with bright metallic and closely-set plumage. The chief character of the family, however, is the bill, which is long, pointed, and compressed.

The ridge of the culmen on the upper mandible is very narrow, and the gonys on the lower mandible is sharply keeled, the base being furnished with rictal bristles. The wings are rounded, the innermost secondaries being nearly as long as the primary-quills.

The tail is long and graduate, the middle feathers usually like the back, while the lateral ones are of a different colour.

The legs are short and the feet small; the toes are four in number, two directed forward and two backward, the claws being small but very sharp.

There are six genera and twenty-six species, and their distribution is confined to Central and South America—from South Mexico to Paraguay. All the genera and species occur in South America.

Four of the genera and seven of the species are represented in British Guiana.

Genus **UROGALBA** Bonap.

Urogalba Bonaparte, Consp. Voluer. Zyg. p. 13, 1854. Type *U. dea* (Linn.).

This monotypic genus is distinguished by having a very graduated tail, the two middle feathers extending far beyond the others, and the plumage being for the most part black. The bill compressed and pointed.

318. *Urogalba dea*.

PARADISE JACAMAR.

Alcedo dea Linn. Syst. Nat. 10th ed. i. p. 116, 1758 (Surinam).

Galbula paradisea (Linn. 1766), Cab. in Schomb. Reis. Guian. iii. p. 717, 1848.

Urogalba paradisea Salvin. Ibis, 1886, p. 66 (Bartica Grove, Merumé Mts.); W. L. Slater, Ibis, 1887, p. 318 (Maccasseema); Slater, Cat. B. Brit. Mus. xix. p. 163, 1891 (Demerara); Beebe, Our Search for a Wilderness, p. 171, 1910 (Hoorie Creek).

Urogalba dea Brabourne & Chubb, B. S. Amer. i. p. 161, no. 1582, 1912.

Adult female. Head dark smoky-brown; back, wings, and tail black with steel-blue, purple, and green reflections, more brightly on the upper wing-coverts; inner webs of primary and secondary quills white at the base; tail much graduated, the lateral feathers, much shorter than the middle pair, are edged with white at the tips; chin sooty-brown, darker and inclining to black on the cheeks; a triangular patch of white on the fore-neck; remainder

of the under surface black with a dark bluish-green gloss; flanks streaked with white; median under wing-coverts and inner edges of quills below white.

Total length 316 mm., culmen 60, wing 92, middle tail-feathers 175, tarsus 14.

The description of the female is based on an example collected on the Ituribisi River.

Adult male. Similar to the adult female. Wing 96 mm.

Breeding-season. Unknown in British Guiana.

Nest. "Like Kingfishers" (Beebe).

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Bartica, Anarika River, Kako River, Great Falls Demerara River, Makauria River, Abary River, Mazaruni River (McConnell collection): Bartica, Merumé Mountains (Whitely); Maccasema (W. L. Sclater); Georgetown (Quelch); Hoorie River (Beebe).

Extralimital Range. Surinam (Linné), Cayenne, North Brazil.

Habits. According to Schomburgk (Reis. Guian. iii. p. 717) this bird often associates with *Euphonia* and Finches that frequent the tall trees on the edges of the woods, or solitary young trees near the Indian settlements. One sees, as a rule, several perched on the outermost branches of the trees, where they watch for insects flying past, which they quickly catch, and return to their perch again. The "Warraus" call it *Nabowusch*.

Mr. J. J. Quelch observed this species in Georgetown, and remarks (Timehri (2) v. p. 96):—"Very occasionally, the long-tailed Paradise Jacamar (*Urogalba paradisea*) will be met with about the bushy parts on the outskirts of the town, but these are evidently, from the very rare occasions on which they are seen, but casual visitors. They are quiet, sluggish, insectivorous creatures, and are generally seen perching in the same place for long periods."

Mr. Beebe writes (Our Search for a Wilderness, p. 171):—"One of the first things which caught our eye were several brilliantly iridescent green birds, insect-catching, among the brush near the house. These were Paradise Jacamars, and they had their homes in the clay banks of the rivulets, deep buried in the narrow valleys which abounded in the forest. Each bird had two or more favourite twigs. When bug-hunting flagged at one post they flew with a long swoop to the second point

of vantage. They were tame, and allowed us to approach within eight or ten feet before flying to their alternate perches. Their feet are small and weak, and they have a hunched up look as they perch in wait, turning the head rapidly in every direction and now and then swooping like a flash after some tiny insect, engulfing it with a loud snap of the mandibles. Their call-note is a sharp, repeated 'pip! pip! pip! pip!' Jacamars form a rather compact group of some twenty species; in habit like Flycatchers; in appearance and nest like Kingfishers, but in structure more closely related to Toucans and Woodpeckers."

Genus **GALBULA** Briss.

Galbula Brisson, Orn. iv. p. 85, 1760. Type *G. galbula* (Linn.).

In this genus the tail is rounded and the plumage is, for the greater part, bronze-green. The bill is slender and compressed.

Key to the Species.

- A. Bill uniform black.
 - a. Abdomen chestnut.
 - a'. Tail uniform bluish green..... *G. galbula*, p. 466.
 - b'. Tail, middle feathers bronze-green, the lateral ones cinnamon-rufous *G. ruficauda*, p. 467.
 - b. Abdomen white *G. leucogaster*, p. 468.
- B. Bill for the most part white *G. albirostris*, p. 469.

319. *Galbula galbula*.

COMMON JACAMAR.

Alcedo galbula Linn. Syst. Nat. 12th ed. i. p. 182, 1766 (Cayenne).

Galbula viridicauda Cab. in Schomb. Reis. Guian. iii. p. 717, no. 234, 1848.

Galbula viridis Salvin, Ibis, 1886, p. 61; Sclater, Cat. B. Brit. Mus. xix. p. 164, 1891 (British Guiana).

Galbula galbula Brabourne & Chubb, B. S. Amer. i. p. 161, no. 1584, 1912.

Adult male. General colour above bright metallic green, including the sides of the face and a broad band across the breast, more bluish on the head, innermost secondaries, and tail, and bronzy reflections on the mantle, back, and breast; a triangular

white patch on the throat; remainder of the under surface, including the under wing-coverts, chestnut.

Total length 210 mm., culmen 42, wing 80, tail 81, tarsus 13.

Adult female. Differs from the adult male in having the triangular throat-patch chestnut instead of white. Wing 78 mm.

The birds from which the descriptions are taken were collected on the Abary River.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Abary River (*McConnell collection*).

Extralimital Range. Cayenne (*Linné*), Venezuela, North and North-east Brazil.

Habits. Schomburgk states (*Reis. Guian. iii. p. 717*) that he found this bird scattered—but always in pairs—in the woods and near the banks of the rivers, where it sits on a branch and waits for insects flying past, on which it darts with lightning quickness, and just as quickly returns to its perch again. He did not find its nest. The “Warraus” call it *Torong*.

320. *Galbula ruficauda*.

RUFIOUS-TAILED JACAMAR.

Galbula ruficauda Cuv. Règn. Anim. i. p. 420, 1817 (Colombia); Salvin, Ibis, 1886, p. 61; Selater, Cat. B. Brit. Mus. xix. p. 166, 1891 (British Guiana); Brabourne & Chubb, B. S. Amer. i. p. 161, no. 1586, 1912.

Galbula leptura Cab. in Schomb. Reis. Guian. iii. p. 717, no. 235, 1848.

Adult male. General colour above and a band across the breast metallic bronze-green with coppery reflections; middle tail-feathers like the back, the lateral ones cinnamon-rufous; throat white; abdomen, under tail-coverts, and under wing-coverts chestnut.

Total length 246 mm., culmen 60, wing 78, tail 106, tarsus 7.

The male described was collected at the Takutu Mountains.

Adult female. Similar to the adult male, but differs in having the throat rufous instead of white. Wing 83 mm.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains (*McConnell collection*); Golden Hill (*Schomburgk*).

Extralimital Range. Tobago, Trinidad, Venezuela, Colombia.

Habits. Schomburgk remarks (*Reis. Guian. iii. p. 717, no. 235*) that the habits of this bird are the same as those of *G. viridicauda* (= *G. galbula*, p. 466), only it seems to prefer the dense and shaded parts of the woods. He found it rather numerous in the vicinity of "Golden Hill." The "Macusis" call it *Kujei* and the "Arenunas" *Pieima*.

321. *Galbula leucogaster*.

WHITE-BELLIED JACAMAR.

Galbula leucogaster Vieill. N. Dict. d'Hist. Nat. xvi. p. 444, 1817 (Guiana); Brabourne & Chubb, B. S. Amer. i. p. 162, no. 1595, 1912.

Galbula leucogastra Salvin, Ibis, 1886, p. 62 (Merumé Mts.); Selater, Cat. B. Brit. Mus. xix. p. 170, 1891 (Demerara).

Galbula albiventer Cab. in Schomb. Reis. Guian. iii. p. 717, 1848.

Adult male. Back deep copper-bronze, duller and inclining to green on the wings and upper tail-coverts; sides of face, top of head, and tail steel-blue with a green reflection on the head; outer tail-feathers brown edged with white; inner webs of primary and secondary quills edged with white towards the base; chin blackish, followed by a white patch on the throat; breast very similar to the back; abdomen, under tail-coverts, under wing-coverts, and inner edge of quills below white.

Total length 197 mm., culmen 40, wing 70, tail 89, tarsus 10.

Adult female. Differs from the adult male only in having the throat buff instead of white. Wing 71 mm.

The female from which the description is taken is in the British Museum, and was collected by Whitely at the Merumé Mountains in June 1881—Salvin-Godman collection.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Berbice River (*McConnell collection*); Merumé Mountains (*Whitely*).

Extralimital Range. North Brazil.

Habits. Schomburgk states (Reis. Guian. iii. p. 717, no. 238) that the mode of life and distribution of this species are the same as those of *G. paradisea* (= *Urogalba dea*, p. 464).

322. *Galbula albirostris*,

WHITE-BILLED JACAMAR.

Galbula albirostris Lath. Ind. Orn. i. p. 245, 1790 (Guiana); Salvin, Ibis, 1886, p. 61 (Bartica Grove, Camacusa, Merumé Mts., Roraima, 3500 ft.); W. L. Slater, Ibis, 1887, p. 318 (Maccasseema); P. L. Slater, Cat. B. Brit. Mus. xix. p. 168, 1891; Brabourne & Chubb, B. S. Amer. i. p. 162, no. 1592, 1912.

Galbula flavirostris Cab. in Schomb. Reis. Guian. iii. p. 717, no. 236, 1848.

Adult male. Back, wings, and tail metallic bronze-green, as are also the cheeks; inner webs of tail-feathers, except the middle ones, edged with cinnamon; crown of head metallic crimson; under surface, including the under wing-coverts, chestnut; a triangular patch of white on the throat.

Total length 177 mm., culmen 36, wing 73, tail 66, tarsus 11.

Adult female. Differs from the adult male in the absence of the white throat-patch. Wing 71 mm.

The birds from which the descriptions are taken were collected on the Ituribisi River.

Breeding-season. Unknown in British Guiana.

Nest. "At the end of a short tunnel" (*Beebe*).

Eggs. "Four round white eggs laid on the bare clay" (*Beebe*).

Range in British Guiana. Ituribisi River, Supenaam River, Bartica, Kamakabra River, Cotinga River, Mazaruni River (*McConnell collection*); Mount Roraima, Merumé Mountains, Kamakusa, Bartica (*Whitely*); Maccasseema (*W. L. Slater*).

Extralimital Range. Venezuela, North Brazil.

Habits. Schomburgk states (Reis. Guian. iii. p. 717, no. 236) that the habits and distribution are exactly the same as those of *G. leptura* (= *G. ruficauda*, p. 467).

Mr. Beebe remarks (Our Search for a Wilderness, p. 236):—"We have found the home of a *Jacamar*. At the end of the short tunnel are four round white eggs laid on the bare clay."

Genus **BRACHYGALBA** Bonap.

Brachygalba Bonaparte, Consp. Voluc. Zygod. p. 13, 1854. Type
B. albigularis (Spix).

This genus is characterized by the graduated tail, the middle tail-feathers reaching slightly beyond the others, and the general colour of the plumage is coppery bronze. The bill is compressed and sharply pointed.

323. *Brachygalba lugubris*.

BLACK-BILLED JACAMAR.

- Galbula lugubris* Swains. Anim. in Menag. p. 329, 1838 (Brazil);
Cab. in Schomb. Reis. Guian. iii. p. 718, 1848.
Brachygalba lugubris Salvin. Ibis, 1886. p. 62 (Roraima, Merumé Mts.);
Selater, Cat. B. Brit. Mus. xix. p. 171, 1891 (British Guiana);
Brabourne & Chubb, B. S. Amer. i. p. 162, no. 1597, 1912.

Adult male. Head, hind-neck, fore-neck, breast, sides of body, and under tail-coverts sooty-brown, paler on the chin and throat and blackish on the thighs and under wing-coverts; middle of abdomen white, as are also the median and greater under wing-coverts; back, wings, and tail blackish with steel-blue reflections.

Total length 159 mm., culmen 44, wing 68, tail 51, tarsus 11.

The description of the male is taken from an example collected by Mr. McConnell at Mount Roraima in October 1898. There are four immature specimens from the same locality which are similar to the adult, but have narrow white edgings to the feathers of the upper parts and the bills are much shorter (25 mm.) and tipped with white.

Adult female. Like the adult male. Wing 68 mm.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Mount Roraima (*McConnell collection*); Merumé Mountains, Mount Roraima (*Whitely*).

Extralimital Range. North-east Brazil, East Peru.

Habits. According to Schomburgk (Reis. Guian. iii. p. 718, no. 239) the habits and distribution of this bird are the same as those of *G. albiventris*, no. 238 (= *G. leucogaster*, p. 468).

Genus **JACAMEROPS** Dum.

Jacamerops Dumont, Diet. Sci. Nat. xxiv. p. 77, 1822. Type *J. grandis* (Gmel.).

This genus is distinguished by the wider bill, which is incurved, and the larger tail, the feathers of which are broader. Upper parts bronze-green, under surface for the most part chestnut.

324. *Jacamerops aurea*.

GOLDEN JACAMAR.

Alcedo aurea P. L. S. Müll. Syst. Nat. Suppl. p. 94, 1776 (Guiana).

Lamproptila grandis Cab. in Schomb. Reis. Guian. iii. p. 718, 1848.

Jacamerops grandis Salvin, Ibis, 1886, p. 62 (Bartica Grove, Camacusa, Merumé Mts., Atapurau River); Selater, Cat. B. Brit. Mus. xix. p. 176, 1891 (Demerara).

Jacamerops aurea Brabourne & Chubb, B. S. Amer. i. p. 163, no. 1606, 1912.

Adult male. General colour above metallic bronze-green, including the sides of the face and throat, with rich golden reflections on the mantle and back, and inclining to blue on the fore part of the head; primary and secondary quills edged with chestnut on the inner webs towards the base; a triangular patch of white on the fore-neck; remainder of the under surface chestnut, with purple reflections on the lower aspect of the tail-feathers.

Total length 300 mm., culmen 45, wing 110, tail 130, tarsus 15.

Adult female. Similar to the adult male, differing only in the absence of the white throat-patch, which is replaced by rufous.

The birds described were collected on the Mazaruni River.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Bartica, Mazaruni River, Arawai River, Tiger Creek (*McConnell collection*); Bartica, Kamakusa, Kamarang River, Merumé Mountains (*Whitely*).

Extralimital Range. Colombia, Ecuador, North-east Peru.

Habits. Unrecorded in British Guiana.

Family BUCCONIDÆ.

The Puff-birds are rather small and of sombre-coloured plumage.

The bill is stout and sharply hooked in the genus *Bucco*, but more slender and much less sharply hooked in *Monasa* and *Chelidonoptera*, and has numerous rictal bristles at the base.

The wings are rounded: the third, fourth, fifth, and sixth primaries are longest and subequal.

The tail is slightly rounded.

The legs are short: the feet small, with rather long toes and sharp claws; the toes are zygodactyle.

Their distribution is within the Neotropical Region—from Guatemala to Argentina.

The family consists of seven genera and about fifty-three species. All the genera and fifty-one species occur in South America, of which four genera and seven species are represented in British Guiana.

Genus BUCCO Briss.

Bucco Brisson, Orn. iv. p. 92, 1760. Type *B. capensis* Linn.

In this genus the bill is strong, wide at the base, and sharply hooked at the tip, with strong rictal bristles at the base. The plumage is barred, spotted, or uniform.

Key to the Species.

- A. Upper surface rufous *B. capensis*, p. 473.
- B. Upper parts black.
 - a. Larger, wing more than 90 mm., tail more than 70 mm.: a narrow white collar on the hind-neck; tail uniform black or only narrowly edged with white at the tip *B. macrorhynchus*, p. 473.
 - b. Smaller, wing less than 90 mm., tail less than 70 mm.: no white collar on the hind-neck; tail black, largely spotted with white *B. tectus*, p. 474.
- C. Upper surface dark earth-brown, with buff edgings to some of the feathers. *B. tamatia*, p. 475.

325. *Bucco capensis*.

COLLARED PUFF-BIRD.

Bucco capensis Linn. Syst. Nat. 12th ed. i. p. 168, 1766 (Guiana);

Brabourne & Chubb, B. S. Amer. i. p. 163, no. 1608, 1912.

Bucco collaris Salvin. Ibis, 1886. p. 62 (Bartica Grove, Camacusa, Merumé Mts., Roraima, 3500 ft.); Selater, Cat. B. Brit. Mus. xix. p. 180, 1891.

Adult male. General colour above rufous, narrowly barred with black; the tail somewhat paler and the interspaces between the black bars wider; sides of face and ear-coverts uniform pale rufous, which extends across the hind-neck, where it forms a collar; this is followed by a black band on the hind-neck, which widens out and forms a broad collar on the fore-neck; primary and secondary quills dark brown, edged with buffy-white on the basal portion of the primaries and by rufous on both webs of the secondaries; throat white; abdomen white, washed with buff more intensely on the flanks, under tail-coverts, and under wing-coverts.

Total length 175 mm., culmen 28, wing 81, tail 61, tarsus 16.

The male from which the description is taken was collected on the Ituribisi River.

Adult female. Similar to the male. Wing 82 mm.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Bartica, Kamakabra River, Bonasika River, Makauria River, Mazaruni River, Arwye River (*McConnell collection*); Mount Roraima, Merumé Mountains, Kamakusa (*Whitely*).

Extralimital Range. North Brazil, Peru, Ecuador.

Habits. Unrecorded in British Guiana.

326. *Bucco macrorhynchus*.

LARGE-BILLED PUFF-BIRD.

Bucco macrorhynchus Gmel. Syst. Nat. i. p. 406, 1788 (Cayenne);

Cab. in Schomb. Reis. Guian. iii. p. 719, 1848; Salvin. Ibis, 1886,

p. 62 (Camacusa, Merumé Mts., Roraima, 3500 ft.); Selater, Cat.

B. Brit. Mus. xix. p. 181, 1891 (British Guiana); Brabourne &

Chubb, B. S. Amer. i. p. 163, no. 1609, 1912.

Adult male. Crown of head uniform black; back, wings, tail, under wing-coverts, and a broad band across the breast black, fringed with white at the tips of the feathers; flanks black, the feathers barred and tipped with white; base of forehead, a collar round the hind-neck, ear-coverts, throat, fore-neck, middle of abdomen, and under tail-coverts white.

Total length 231 mm., culmen 36, wing 105, tail 81, tarsus 21.

The male from which the description is taken was collected on the Ituribisi River.

Adult female. Similar to the adult male. Wing 114 mm.

Immature. Differs from the adult in having the white on the under surface pervaded with buff and the feathers on the lower back and wings edged with buff.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Supenaam River, Bonasika River, Anarika River, Great Falls Demerara River (*McConnell collection*); Canuku Mountains (*Schomburgk*); Mount Roraima, Merumé Mountains, Kamakusa (*Whitely*).

Extralimital Range. Cayenne (*Gmelin*), Northern Brazil.

Habits. According to Schomburgk (*Reis. Guian. iii. p. 719*) this bird is rare in British Guiana. He only met with a few individuals in the Canuku Mountains.

327. *Bucco tectus*.

CAYENNE PUFF-BIRD.

Bucco tectus Bodd. Tabl. Pl. Enl. p. 43, 1783 (Cayenne); Salvin, Ibis, 1886, p. 62 (Bartica Grove, Camacusa, Merumé Mts.); Selater, Cat. B. Brit. Mus. xix. p. 185, 1891; Brabourne & Chubb, B. S. Amer. i. p. 164, no. 1615, 1912.

Adult male. Upper surface, sides of face, a broad band across the fore-neck, and sides of the body black, with white spots on the fore part of the head; loreal streak and a line behind the eye white; tips of the scapulars white, and large white spots on the tail-feathers; throat and middle of abdomen white, the feathers on the sides of the abdomen particoloured, black and white.

Total length 160 mm., culmen 22, wing 75, tail 56, tarsus 16.

The male from which the description is taken was collected on the Supenaam River.

Adult female. Similar to the adult male. Wing 71 mm.

The female examined is in the British Museum, and was collected by Whitely at Mount Roraima on the 14th of January, 1880—Salvin-Godman collection.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Supenaam River. Bartica, Bonasika River, Warima River, Mazaruni River, Arwye River, Tiger Creek (*McConnell collection*); Bartica, Kamakusa, Merumé Mountains (*Whitely*).

Extralimital Range. Cayenne (*Boddaert*), North-east Brazil.

Habits. Unrecorded in British Guiana.

328. *Bucco tamatia*.

CAYENNE SPOTTED PUFF-BIRD.

Bucco tamatia Gmel. Syst. Nat. i. p. 405, 1788 (Cayenne); Cab. in Schomb. Reis. Guian. iii. p. 719, 1848; Salvin, Ibis, 1886, p. 63 (Bartica Grove, Camacusa, Merumé Mts.); Selater. Cat. B. Brit. Mus. xix. p. 188, 1891; Brabourne & Chubb, B. S. Amer. i. p. 164, no. 1622, 1912.

Adult female. General colour above dark earth-brown; forehead and eyebrows tinged with rufous; a buffy-white collar indicated on the hind-neck, with buff edgings to the feathers on the wings, back, and upper tail-coverts; the outer primaries, which are incised on the outer webs towards the tip, are narrowly fringed with buff on the outer edges and more broadly on the inner webs; sides of face black divided by a moustachial streak of white; throat rufous; chin whitish, strongly furnished with hair-like bristles; breast and abdomen white, thickly spotted with black; under tail-coverts white, tinged with buff, and obsolete spots of brown; under wing-coverts buff, more or less marked with black.

Total length 174 mm., culmen 23, wing 81, tail 62, tarsus 17.

The female described was collected on the Bonasika River.

Adult male. Like the adult female. Wing 80 mm.

Immature. Differs from the adult in the absence of the chestnut on the throat, the black patch on the hinder cheeks, in having

a buff collar, which surrounds the neck, and the feathers of the upper surface more profusely edged with buff.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Ituribisi River, Supenaam River, Bartica, Kamakabra River, Bonasika River, Abary River, Ireng River, Arwye River, Great Falls Demerara River, Arawai River (*McConnell collection*) ; Merumé Mountains, Kamakusa, Kamarang River, Annai (*Whitely*).

Extralimital Range. Cayenne (*Gmelin*), North Brazil.

Habits. This bird, according to Schomburgk (*Reis. Guian.* iii. p. 719), is generally distributed throughout British Guiana. It is usually found in dense woods, and, as a rule, singly, rarely in pairs, sitting in a drowsy manner on a low branch watching for passing insects. It is not shy, and remains on its perch until one is within about six or eight paces, when it flies a short distance and settles again in a similar manner. The food consists of insects. The "Macusis" call it *Kawari*.

Genus **MALACOPTILA** Gray.

Malacoptila Gray, List Gen. B. p. 13, 1841. Type *M. fusca* (Gmel.).

This genus is distinguished by the thinner bill, which is curved towards the tip but scarcely hooked, the long rictal bristles, and the streaked plumage.

329. *Malacoptila fusca*.

WHITE-BREASTED PUFF-BIRD.

Bucco fuscus Gmel. Syst. Nat. i. p. 408, 1788 (Cayenne).

Malacoptila fusca Sclater, Cat. B. Brit. Mus. xix. p. 193, 1891 (Demerara River) ; Brabourne & Chubb, B. S. Amer. i. p. 165, no. 1631, 1912.

Adult female. General colour smoky-brown, with buff or white shaft-streaks to the feathers of the head, back, wings, and breast ; outer webs of some of the outer primary-quills incised towards the tips ; inner webs of primary and secondary quills edged with buff towards the base ; a spot of white in front of the eye, another at the base of the lower mandible, also a white patch on the fore-neck ; abdomen and under tail-coverts dull white ; under wing-coverts and quill-lining buff.

Total length 155 mm., culmen 18, wing 82, tail 60, tarsus 20.

The female from which the description is taken was collected at Bartica.

Adult male. Similar to the female in the colour of the plumage.

Wing 85 mm.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Bartica (*McConnell collection*).

Extralimital Range. Cayenne (*Gmelin*), Peru, Ecuador, Colombia.

Habits. Unrecorded in British Guiana.

Genus **MONASA** Vieill.

Monasa Vieillot, Anal. nouv. Orn. p. 27, 1816. Type *M. niger* (P. L. S. Müll.).

This monotypic genus is distinguished by the larger size, the compressed and curved bill, which is always red, the long tail, and the slaty-black plumage.

330. *Monasa niger*.

BLACK PUFF-BIRD.

Cuculus niger P. L. S. Müll. Syst. Nat. Suppl. p. 90, 1776 (Cayenne).

Monasa tranquilla Cab. in Schomb. Reis. Guian. iii. p. 719, 1848.

Monasa atra Salvin, Ibis, 1886, p. 63 (Camacusa, Merumé Mts., River Ataparau).

Monacha nigra Slater, Cat. B. Brit. Mus. xix. p. 203, 1891 (British Guiana); Lloyd, Timehri (2) xi. p. 6, 1897 (nesting-habits).

Monasa niger Brabourne & Chubb, B. S. Amer. i. p. 167, no. 1649, 1912.

“Red-billed Barbet” (*Lloyd*).

Adult male. General colour above and below blackish slate-colour, rather paler on the abdomen; lesser upper and under wing-coverts white; median upper wing-coverts fringed with white. Bill red.

Total length 260 mm., culmen 34, wing 126, tail 119, tarsus 23.

The male described was collected on the Kamakabra River.

Adult female. Like the adult male in the colour of the plumage, but slightly larger. Wing 137 mm.

Breeding-season. Unrecorded in British Guiana.

Nest. "Nests in the burrows of the Armadillo and Paca" (C. A. Lloyd).

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Bartica, Kamakabra River. Kurubung River. Rupununi River (McConnell collection); Kamakusa. Merumé Mountains, Kamarang River (Whitely).

Extralimital Range. Cayenne (P. L. S. Müller), Northern Brazil.

Habits. Schomburgk states (Reis. Guian. iii. p. 719) that this beautiful large species was always found in pairs. It preferred the dense woods near the river-banks, where it haunted the trees. Its food consisted of insects, which it caught on the wing. The "Warraus" called it *Horuptipara* and the "Macusis" *Warapischuro*.

Mr. C. A. Lloyd, writing on the nesting of some Guiana birds, remarks (Timehri (2) xi. p. 6):—"According to Mr. Barshall, the burrows of the Armadillo and Paca (*Carlogeyns para*) are resorted to by the Red-billed Barbet (*Monacha nigra*) as a nesting-place. He has never seen their eggs, but all the nests examined by him have contained only two young birds. To the Caribesie Indians this Barbet is known from its cry as the *Chekeeda*, which means in their dialect, 'I hav'nt got it.'"

Genus **CHELIDOPTERA** Gould.

Chelidoptera Gould, P. Z. S. 1836, p. 81. Type *C. tenebrosa* (Pall.).

This genus is characterized by the smaller size, the thin and pointed bill, the short and square tail, and the comparatively long wings, which reach almost to the tip of the tail.

331. *Chelidoptera tenebrosa*.

SWALLOW PUFF-BIRD.

Cuculus tenebrosus Pall. Neue Nord. Beytr. iii. p. 2. 1782 (Surinam).

Chelidoptera tenebrosa Cab. in Schomb. Reis. Guian. iii. p. 720, 1848; Salvin, Ibis, 1886, p. 63 (Bartica Grove, Merumé Mts., River Yuruani); W. L. Slater, Ibis, 1887, p. 317 (Maccasseema); Quelch, Timehri (2) ii. p. 375, 1888 (Abary River); Slater, Cat. B. Brit. Mus. xix. p. 207, 1891 (Roraima); Brabourne & Chubb, B. S. Amer. i. p. 167, no. 1657, 1912.

Brachypetes tenebrosa Brown, Canoe and Camp Life. p. 153, 1876 (Quitaro River).

“Swallow-winged Barbet” (*Quelch*).

Adult male. General colour slaty-black, including the head, back, wings, tail, throat, and breast; rump, upper tail-coverts, under wing-coverts, and axillaries white; lower flanks and vent chestnut; under tail-coverts pale grey, with dark shaft-lines.

Total length 155 mm., culmen 17, wing 103, tail 47, tarsus 13.

The description of the male is based on an example collected on the Ituribisi River.

Adult female. Similar to the male in plumage, but rather larger in size. Wing 108 mm.

Breeding-season. Unrecorded in British Guiana.

Nest. “It makes a hole in the side of a sand-hill, in which it lays its eggs and hatches its young” (*Brown*).

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Bartica, Kamakabra River, Bonasika River, Makauria River, Abary River, Mazaruni River. Great Falls Demerara River, Arawai River (*McConnell collection*); Kwitaro River (*Brown*); Maccasseema (*W. L. Sluter*); Bartica, Merumé Mountains, Mount Roraima, Yuruani River (*Whitely*).

Extralimital Range. Surinam (*Pallas*), Venezuela, Colombia, Central Brazil.

Habits. According to Schomburgk (*Reis. Guian.* ii. p. 490, iii. p. 720) this bird is very common in British Guiana, though he never found its nest. Its favourite perch was on the topmost branches of tall trees. The “Macusis” and “Arekunas” call it *Herioba*.

Mr. Barrington Brown writes (*Canoe and Camp Life*, p. 153):—“A small dark-coloured bird, very common on the Quitaro and, in fact, on all the rivers of Guiana, where it is seen sitting on the limbs of high, dead trees, patiently awaiting for some insect to pass, which it catches on the wing.

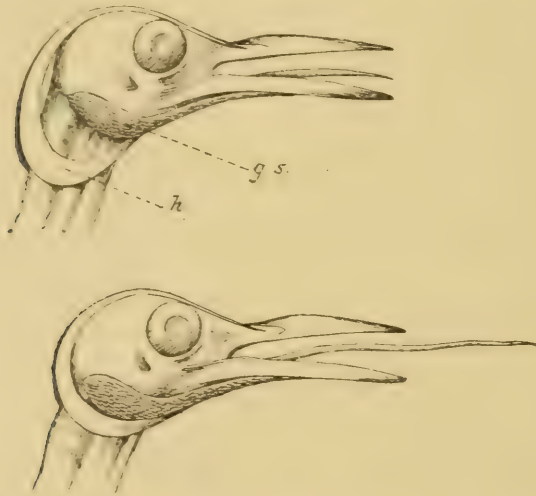
“It is a stumpy-built bird, and its flight is very bat-like. It makes a hole in the side of a sand-hill, in which it lays its eggs and hatches its young.”

Mr. J. J. Quelch writes (*Timehri* (2) ii. p. 375) that the only Barbet that he met with during his trip on the Abary River was *Chelidoptera tenebrosa*, the Swallow-winged Barbet.

Family PICIDÆ.

The Woodpeckers are medium and small sized birds. Their plumage is generally harsh in texture and variously coloured. Their bills are very strong, straight, and wedge-shaped at the tip. Their necks are thin. Their wings are usually rounded, the third, fourth, fifth, and sixth quills being longest and subequal. Their tails are generally rounded, the feathers being pointed and the shafts much stiffened. Their legs are short, their feet small, their toes four in number, two being directed forwards and two backwards, and their claws are strong and sharply curved.

They are distributed in Europe, Africa, Asia, North, Central, and South America, and the West India Islands. There are fifteen genera and about one hundred and fifty-two species known to occur in South America, nine genera and sixteen species being represented in British Guiana.



Picus viridis.

* Fig. 94.—To show the prehensile tongue.

g.s. Glandula sublingualis. *h.* Hyoid.

* These figures were taken from specimens in the British Museum (Natural History).



Campephilus melanoleucus.

Fig. 95.—To show the stiffened tail-feathers.

Genus **CHLORONERPES** Swains.

Chloronerpes Swainson, Classif. B. ii. p. 307, 1837. Type *C. rubiginosus* (Swains.).

In this genus the nasal apertures are covered with bristles on the posterior portion, the outer anterior toe is longer than the outer posterior toe, and the general colour of the upper surface is golden green.

Key to the Species.

- A. Crown of head and nape entirely red.
 - a. Larger, wing more than 125 mm.; throat green narrowly barred with white; malar region green tinged with red *C. capistratus*, ♂, p. 482.
 - a'. Malar region uniform green without any tinge of red *C. capistratus*, ♀, p. 482.
 - b. Smaller, wing less than 125 mm.; throat uniform yellow; malar region yellow tinged with red *C. flavigula*, ♂, p. 482.
 - b'. Malar region uniform yellow without any tinge of red *C. flavigula*, ♀, p. 482.
- B. Crown of head grey, nape only red; throat blackish spotted with white; malar region red in contrast to the throat ...
 - c. Malar region blackish spotted with white like the throat..... *C. rubiginosus*, ♂, p. 483.
 - *C. rubiginosus*, ♀, p. 483.

332. *Chloronerpes capistratus*.

BONAPARTE'S GREEN WOODPECKER.

Chrysopicus capistratus Bonap. Consp. Voluer. Zygod. p. 9, no. 151, 1851 ("Brésil").

Chloronerpes capistratus Hargitt, Cat. B. Brit. Mus. xviii. p. 74, 1890 (Rupununi River); Brabourne & Chubb, B. S. Amer. i. p. 169, no. 1673, 1912.

Adult male. General colour above golden green including the back, wings, and tail; quills blackish with golden green on the outer webs and cinnamon-rufous on the inner webs towards the base; tail like the back, the shafts and tips of the feathers inclining to black; sides of the face similar to the back, with a line of golden yellow from the base of the bill and below the eye on to the sides of the neck; crown of head and nape red; malar region more or less tinged with red; entire under surface dull olive-green barred with buffy-white; under wing-coverts and quill-lining cinnamon-rufous; edge of wing yellowish, with dark edges to the feathers.

Total length 245 mm., culmen 31, wing 140, tail 75, tarsus 24.

Adult female. Differs from the adult male in the absence of the red on crown of the head and nape and in the malar region being uniform green without any tinge of red. Wing 142 mm.

This species is not represented in the McConnell collection, and the descriptions are taken from specimens in the British Museum collected by Whitely on the Rupununi River in April and July, 1889—Salvin-Godman collection.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Rupununi River (Whitely).

Extralimital Range. North Brazil, Ecuador.

Habits. Unrecorded in British Guiana.

333. *Chloronerpes flavigula*.

YELLOW-THROATED GREEN WOODPECKER.

Picus flavigula Bodd. Tabl. Pl. Enl. p. 49, 1783 (Cayenne).

Chloronerpes chrysocephalus Cab. in Schomb. Reis. Guian. iii. p. 716, 1848.

Chloronerpes flavigularis Salvin, Ibis, 1886, p. 58 (Bartica Grove, Camacusa).

Chloronerpes flavigula Hargitt, Cat. B. Brit. Mus. xviii. p. 77, 1890 (Bartica Grove); Brabourne & Chubb, B. S. Amer. i. p. 169, no. 1677, 1912.

Adult male. Back, wings, and tail olive-green; inner webs of primary and secondary quills blackish brown at the tips and cinnamon or chestnut towards the base; tail-feathers blackish along the shaft-lines and at the tips; top of head, nape, and malar patch red; throat and sides of face golden yellow; under surface dusky green, with lanceolate white spots to the feathers; under wing-coverts and quill-lining cinnamon.

Total length 163 mm., culmen 19, wing 120, tail 63, tarsus 18.

The description of the male is based on a specimen collected on the Warima River.

Adult female. Differs from the adult male in the absence of red on the fore part of the head and the red malar patch, which is replaced in each case by yellow. Wing 140 mm.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Supenaam River, Bartica, Bonasika River, Anarika River, Mazaruni River, Makauria River, Great Falls Demerara River, Warima River, Arawai River (*McConnell collection*); Kamakusa, Bartica (*Whitely*).

Extralimital Range. Cayenne (*Boddaert*), Ecuador, Peru.

Habits. According to Schomburgk (Reis. Guian. iii. p. 715) this bird was distributed throughout British Guiana.

334. *Chloronerpes rubiginosus*.

SWAINSON'S GREEN WOODPECKER.

Picus rubiginosus Swains. Zool. Illustr. pl. xiv., 1820 (Venezuela).

Chloronerpes rubiginosus Cab. in Schomb. Reis. Guian. iii. p. 715, 1848; Salvin, Ibis, 1886, p. 59 (Bartica Grove, Merumé Mts., Roraima, 3500 ft.); Hargitt, Cat. B. Brit. Mus. xviii. p. 86, 1890; Brabourne & Chubb, B. S. Amer. i. p. 170, no. 1687, 1912.

Adult male. Back, wings, and tail golden olive-brown; bastard-wing and primary-coverts blackish; quills dark brown on the inner webs at the tips, and white, or sulphur-yellow, on the edges towards the base; top of head dark slate-grey; sides of hinder

crown, nape, and malar patch red; lores and space surrounding the eye buffy-white; throat and sides of the neck black, with double twin white spots to the feathers; breast dark brown narrowly barred with buffy-white; remainder of the under surface similar in colour but more broadly barred; under wing-coverts and quill-lining lemon-yellow.

Total length 192 mm., culmen 23, wing 116, tail 69, tarsus 18.

Adult female. Similar to the adult male, differing only in the absence of the red malar patch, which space is like the throat. Wing 113 mm.

The male and female described were collected on the Anarika River.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Mount Roraima, Makauria River, Anarika River, Mazaruni River (*McConnell collection*); Mount Roraima, 3500 feet, Merumé Mountains, Kamarang River (*Whitely*).

Extralimital Range. Venezuela,

Habits. Schomburgk states (*Reis. Guian.* iii. p. 715) that he found this species throughout British Guiana.

Genus **MELANERPES** Swains.

Melanerpes Swainson. *Faun. Bor.-Amer., Birds*, p. 316, Feb. 1832.

Type *M. erythrocephalus* (Linn.).

This genus is distinguished by having the nostrils entirely covered with bristles, the tarsus shorter than the outer posterior toe, and the general colour of the plumage, of the Guiana species, for the most part, black.

Key to the Species.

- | | |
|--|-----------------------------------|
| A. A nuchal collar of golden yellow in contrast to the upper back; a red spot on the middle of the crown | <i>M. cruentatus</i> , ♀, p. 485. |
| a. No red spot on the middle of the crown | <i>M. cruentatus</i> , ♂, p. 485. |
| B. No nuchal collar, nape uniform black like the upper back; a red spot on the middle of the crown | <i>M. rubrifrons</i> , ♂, p. 486. |
| b. No red spot on the middle of the crown, which is uniform black | <i>M. rubrifrons</i> , ♀, p. 486. |

335. *Melanerpes cruentatus*.

LITTLE BLACK WOODPECKER.

Picus cruentatus Bodd. Tabl. Pl. Enl. p. 43, 1783 (Cayenne).

Centurus hirundinaceus Cab. in Schomb. Reis. Guian. iii. p. 714, 1848.

Melanerpes cruentatus Hargitt. Cat. B. Brit. Mus. xviii. p. 155, 1890; Brabourne & Chubb, B. S. Amer. i. p. 171, no. 1703, 1912.

Adult male. General colour glossy black, including the head, back, wings, tail, throat, and breast; a line behind the eye, rump, and upper tail-coverts white with a yellowish tinge; a yellow nuchal collar; abdomen and a spot in the middle of the crown red; sides of the body, under tail-coverts, and under wing-coverts white barred with black; inner webs of flight-quills spotted with white; inner webs of middle tail-feathers fringed with white towards the base.

Total length 181 mm., culmen 25, wing 113, tail 58, tarsus 18.

Adult female. Differs from the adult male only in the absence of the red spot in the middle of the crown. Wing 111 mm.

This species is not represented in the McConnell collection, and the descriptions are taken from specimens in the British Museum collected by Whitely at Bartica and Takutu River—Hargitt collection.

Breeding-season. Unknown in British Guiana.

Nest. "It nests in holes in trees, but the nest is nearly always inaccessible" (*Schomburgk*).

Eggs. Undescribed from British Guiana.

Range in British Guiana. Demerara, Bartica, Kamarang River, Takutu River (*Whitely*).

Extralimital Range. Cayenne (*Boddaert*), Brazil, Venezuela, Colombia, Ecuador, Peru, Bolivia.

Habits. According to Schomburgk (*Reis. Guian. iii. p. 714*) this bird was distributed throughout British Guiana. It haunted isolated trees and trees scorched by forest-fires. It was usually met with in pairs, and one rarely found more than one pair on the same tree; if others attempted to intrude they were immediately chased away under full cry. It made its nest in holes in trees, but the nest was nearly always inaccessible. The "Warraus" call it *Palleteute*.

336. *Melanerpes rubrifrons*.

RED-FRONTED WOODPECKER.

Picus rubrifrons Spix, Av. Bras. i. p. 61, pl. 55, figs. 1, 2. 1824 (Pará).

Melanerpes rubrifrons Salvin, Illis. 1886, p. 59 (Bartica Grove, Camacusa, Merumé Mts., Atapurau River); Hargitt, Cat. B. Brit. Mus. xviii. p. 157, 1890; Brabourne & Chubb, B. S. Amer. i. p. 171, no. 1704, 1912.

Adult male. Glossy blue-black on the upper back, wings, tail, throat, and breast; middle of the crown and centre of abdomen red; sides of body, thighs, and under tail-coverts white barred with black; lower back, rump, and upper tail-coverts buffy-white; quills notched with white on the inner webs towards the base; middle tail-feathers edged more or less with white on the inner web; inner webs of outer tail-feathers barred with white at the tips.

Total length 177 mm., culmen 25, wing 111, tail 53, tarsus 19.

The male from which the description is taken was collected at Bartica.

According to the 'Catalogue of Birds' the female differs from the adult male in the absence of the red spot on the crown of the head.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Supenaam River, Bartica, Bonasika River, Abary River (*McConnell collection*); Kamarang River, Kamakusa, Merumé Mountains, Bartica (*Whitely*).

Extralimital Range. North, North-east, and East Brazil.

Habits. Unrecorded in British Guiana.

Genus *VENILIORNIS* Bonap.

Veniliornis Bonaparte, Consp. Volucr. Zygod. p. 10, 1854. Type *V. sanguineus* (Licht.).

In this genus the chin-angle is on a line with the anterior part of the nostrils, and the tarsus is longer than the outer posterior toe without claw.

Key to the Species.

- A. Upper surface almost entirely uniform red ;
head and back alike *V. sanguineus*, p. 487.
- B. Upper surface not uniform ; head not like the
back.
- a. No collar on the hind-neck ; median upper
wing-coverts uniform *V. passerinus*, p. 488.
- b. A golden-yellow collar on the hind-neck,
with pale shaft-markings on the median
upper wing-coverts *V. cassini*, p. 488.

337. *Veniliornis sanguineus*.

BLOOD-COLOURED WOODPECKER.

Picus sanguineus Licht. Cat. Rer. Hamb. p. 17, 1793 (Guiana).

Dendrobates sanguineus Cab. in Schomb. Reis. Guian. iii. p. 715, 1848 ;

Hargitt, Cat. B. Brit. Mus. xviii. p. 348, 1890.

Chloronerpes sanguineus Salvin, Ibis, 1886, p. 58.

Veniliornis sanguineus Brabourne & Chubb, B. S. Amer. i. p. 173,
no. 1718, 1912.

Adult male. Head, entire back, including the upper tail-coverts, and wings bright red (vermilion), with pale sagittate markings on the upper wing-coverts ; bastard-wing, primary-coverts, and quills dark brown, with white notches on the inner webs ; tail dark brown, the outer feathers barred or edged with buffy-white ; ear-coverts pale brown ; entire under surface blackish brown narrowly barred with white.

Total length 139 mm., culmen 18, wing 72, tail 42, tarsus 16.

The male described was collected on the Anarika River.

Adult female. Differs from the adult male in having the crown of the head and nape brown with pale shaft-streaks and the under surface paler brown. Wing 73 mm.

The female described was collected on the Abary River.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Abary River, Anarika River, Lama River (*McConnell collection*).

Extralimital Range. Venezuela.

Habits. Schomburgk states (Reis. Guian. iii. p. 716, no. 230) that this bird was one of the commonest of the Woodpeckers ; he met with it everywhere. Its habits are the same as those of the preceding species (= *V. passerinus*, p. 488).

338. *Veniliornis passerinus*.

PASSERINE WOODPECKER.

Picus passerinus Linn. Syst. Nat. 12th ed. i. p. 174. 1766 (Guiana).

Dendrobates passerinus Cab. in Schomb. Reis. Guian. iii. p. 716, 1848.

Dendrobates tephrodops Hargitt, Cat. B. Brit. Mus. xviii. p. 352, 1890 (Berbice).

Veniliornis passerinus Brabourne & Chubb, B. S. Amer. i. p. 173, no. 1722, 1912.

Adult male. Entire back and wings golden olive; bastard-wing, primary-coverts and quills brown, the last notched with white on the inner webs; tail dark brown, more or less marked with paler brown; crown of head and nape red; ear-coverts pale brown; entire under surface brown barred with white.

Total length 126 mm., culmen 19, wing 80, tail 43, tarsus 15.

Adult female. Differs from the adult male only in having the crown of the head and nape brown, with pale shaft-lines to the feathers instead of red. Wing 80 mm.

The male and female described were collected at the Takutu Mountains.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Ituribisi River, Supenaam River, Ireng River (*McConnell collection*); Berbice River (*British Museum*).

Extralimital Range. Cayenne. North and North-east Brazil.

Habits. Schomburgk states (Reis. Guian. iii. p. 716, no. 229) that he found this bird throughout British Guiana. It was generally met with in pairs, and frequented the woods and the trees in the towns and villages. The habits are the same as those of the other Woodpeckers.

339. *Veniliornis cassini*.

CASSIN'S WOODPECKER.

Mesopicus cassini Malh. Picidæ, ii. p. 55, pl. lviii. figs. 2, 3, 1862 (Brazil).

Chloronerpes sedulus Salvin, Ibis, 1886, p. 58.

Dendrobates cassini Hargitt, Cat. B. Brit Mus. xviii. p. 360, 1890
(Bartica Grove, Roraima, Merumé Mts., Takutu River).

Veniliornis cassini Brabourne & Chubb, B. S. Amer. i. p. 174, no. 1731,
1912.

Adult male. Back and wings golden olive, with paler sagittate shaft-lines to the feathers of the median upper wing-coverts; quills dark brown on the inner webs and notched with white; tail-feathers brown, irregularly marked with paler brown and notched with white on the inner webs; a narrow collar of golden yellow on the hind-neck; the feathers on the crown and nape black, tipped with red; ear-coverts pale brown; entire under surface dark brown, or blackish, barred with white.

Total length 166 mm., culmen 21, wing 91, tail 53, tarsus 18.

We do not know the exact locality, in British Guiana, of the male from which the description is taken.

Adult female. Similar to the male, but differs in the absence of the red tips to the feathers on the head, and in having pale rounded spots on the median upper wing-coverts. Wing 95 mm.

The female described was collected at Bartica.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Bartica, Kamakabra River, Abary River (*McConnell collection*); Takutu River, Mount Roraima, Merumé Mountains, Bartica, Kamarang River (*Whitely*).

Extralimital Range. French Guiana, North-east Brazil.

Habits. Unrecorded in British Guiana.

Genus **CELEUS** Boie.

Celeus Boie, Isis, 1831, p. 542. Type *C. flavescens* (Gmel.).

This genus is distinguished by having the nostrils entirely exposed and the nasal aperture rounded.

Key to the Species.

- | | |
|--|-------------------------------|
| A. Larger, wing more than 120 mm.; upper surface almost uniform, not barred | <i>C. hellmayri</i> , p. 490. |
| B. Smaller, wing less than 120 mm.; upper parts particoloured, mostly barred | <i>C. undatus</i> , p. 490. |

340. *Celeus hellmayri*.

HELLMAYR'S WOODPECKER.

- Celeus hellmayri* Berlepsch, Nov. Zool, xv. p. 272, 1908 (British Guiana);
 Brabourne & Chubb, B. S. Amer. i. p. 175, no. 1746, 1912.
Celeus cinnamomeus (nec Gmel.), Cab. in Schomb. Reis. Guian. iii.
 p. 715, 1848; Salvin, Ibis, 1886, p. 59 (Camacusa, Bartica Grove).
Celeus reichenbachii Hargitt, Cat. B. Brit. Mus. xviii. p. 427, 1890
 (Camacusa, Bartica Grove, Quonga, Takutu River).

Adult male. General colour chestnut-brown, including the head, neck, upper back, wings, throat, breast, and middle of the abdomen, paler and more cinnamon on the head and elongated nuchal crest; the feathers of the back and upper wing-coverts have pale triangular spots on the shaft-lines; marginal upper wing-coverts, bastard-wing, and primary-coverts blackish, with pale markings; inner webs of quills blackish, with rufous or citron-yellow bars; lower back, rump, upper tail-coverts, sides of body, under wing-coverts, and base of quill-lining citron-yellow, more or less tinged with chestnut; tail black; vent and under tail-coverts paler than the abdomen; malar patch red.

Total length 266 mm., culmen 28, wing 160, tail 97, tarsus 25.

Adult female. Similar to the adult male, but differs chiefly in the absence of the red malar patch. Wing 160 mm.

The male described was collected on the Kamakabra River and the female on the Warima River.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Supenaam River, Bonasika River, Abary River (*McCormell collection*); Quonga, Takutu River, Kamarang River, Kamakusa, Bartica (*Whitely*).

Extralimital Range. Surinam (*Penard*), North-east Venezuela.

Habits. Unrecorded in British Guiana.

341. *Celeus undatus*.

WAVED WOODPECKER.

- Picus undatus* Linn. Syst. Nat. 12th ed. i. p. 175, 1766 (Cayenne).
Celeus rufus Cab. in Schomb. Reis. Guian. iii. p. 715, 1848; Salvin,
 Ibis, 1886, p. 59 (Bartica Grove, Camacusa, Merumé Mts.);
 Hargitt, Cat. B. Brit. Mus. xviii. p. 430, 1890 (Takutu River).

Celeus undatus Brabourne & Chubb, B. S. Amer. i. p. 175, no. 1749, 1912.

Adult male. General colour above and below rufous, barred on the upper surface with black, and irregularly marked by the same colour on the feathers of the under parts; head and nuchal crest paler and more cinnamon, minutely dotted with black; ear-coverts, hinder cheeks, chin, and upper throat similar, but more conspicuously spotted with black; fore part of cheeks bright red; the feathers on the lower back more narrowly barred; under wing-coverts and base of quill-lining citron-yellow.

Total length 184 mm., culmen 21. wing 108, tail 65. tarsus 17.

Adult female. Similar to the adult male, but differs in the absence of the red malar patch. Wing 113 mm.

The male described was collected on the Warima River and the female on the Ituribisi River.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Ituribisi River, Supenaam River, Bartica, Bonasika River, Makauria River, Abary River (*McConnell collection*); Canuku Mountains (*Schomburgk*); Merumé Mountains, Kamakusa, Bartica, Kamarang River (*Whitely*).

Extralimital Range. Surinam (*Penard*), Cayenne (*Linné*), North Brazil.

Habits. According to Schomburgk (*Reis. Guian.* iii. p. 715), this species is one of the commonest Woodpeckers in British Guiana, especially in the Canuku Mountains. It prefers the depths of the woods, and could always be distinguished by its loud call.

Genus **CERCHNEIPICUS** Bonap.

Cerchneipicus Bonaparte, *Consp. Av. Voluer.* Zygod. p. 9, 1854. Type *C. tinnunculus* (Wagl.).

In this genus there is a distinct nasal ridge, the nostrils are exposed, and the nasal aperture elongated. General colour for the most part rufous.

342. **Cerchneipicus torquatus.**

RINGED WOODPECKER.

Picus torquatus Bodd. *Tabl. Pl. Enl.* p. 52, 1783 (Cayenne).

Celeus multicolor Cab. in Schomb. *Reis. Guian.* iii. p. 715, 1818;

Salvin, *Ibis*, 1886. p. 59.

Cerchneipicus torquatus Hargitt, Cat. B. Brit. Mus. xviii. p. 437, 1890 (Takutu River, Rupununi River); Brabourne & Chubb, B. S. Amer. i. p. 176, no. 1754, 1912.

Adult male. General colour above and below chestnut-rufous barred or marked with black; outer edge of wing, breast, fore-neck, and collar on hind-neck uniform black; top of head, hinder face, and throat uniform cinnamon-rufous; some of the short feathers surrounding the eye black; a large malar patch of red; under tail-coverts, under wing-coverts, and base of quill-lining uniform rufous.

Total length 267 mm., culmen 33, wing 150, tail 95, tarsus 25.

The male from which the description is taken was collected on the Abary River.

Adult female. Differs from the adult male in the absence of the red patch on the malar region, which is uniform in colour with the head and throat. Wing 155 mm.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Abary River, Essequibo River (McConnell collection); Takutu River, Rupununi River (*Whitely*).

Extralimital Range. Cayenne (*Boddaert*), North Brazil.

Habits. Schomburgk states (Reis. Guian. iii. p. 715) that he found this Woodpecker more common in the woods near the coast than in those of the interior.

Genus **CROCOMORPHUS** Hargitt.

Crocomorphus Hargitt, Cat. B. Brit. Mus. xviii. p. 439, May 1890.

Type *C. flavus* (P. L. S. Müll.).

In this genus there is no distinct nasal ridge, the nasal aperture is rounded, and the general colour of the plumage is, for the most part, yellow.

343. **Crocomorphus flavus.**

CHESTNUT-WINGED WOODPECKER.

Picus flavus P. L. S. Müll. Syst. Nat. Suppl. p. 91, 1776 (Cayenne).

Celeus exalbidus Cab. in Schomb. Reis. Guian. iii. p. 715, 1848.

Celeus citrinus Salvin, Ibis, 1886, p. 59.

Crocomorphus flavus Hargitt, Cat. B. Brit. Mus. xviii. p. 440, 1890 (British Guiana); Brabourne & Chubb, B. S. Amer. i. p. 176, no. 1757, 1912.

Adult male. General colour above and below pale yellow; malar patch red; lesser upper wing-coverts brown, edged with buffy-white; bastard-wing, primary-coverts, and outer primary quill uniform brown, the last rufous at base of the inner web; the remainder of the primary and secondary quills rufous except the apical portion of some of the primaries; tail blackish; basal portion of quill-lining rufous.

Total length 240 mm., culmen 26, wing 136, tail 75, tarsus 27.

Adult female. Differs from the adult male only in the absence of the red malar patch. Wing 131 mm.

We do not know the exact locality, in British Guiana, where the male bird was procured, but the female was collected on the Ituribisi River.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Ituribisi River, Supenaam River, Lama River, Abary River (*McConnell collection*).

Extralimital Range. Cayenne (*P. L. S. Müller*), North Brazil, Peru, Ecuador.

Habits. Schomburgk states (*Reis. Guian. iii. p. 715*) that he only met with this bird near the coast. It was a rare species, and he only obtained a single specimen during the whole of his journey in the Colony. Its habits and mode of life are the same as those of other Woodpeckers.

Genus **CAMPEPHILUS** Gray.

Campephilus Gray, List Gen. B. p. 54, 1840. Type *C. principalis* (Linn.).

This genus is distinguished by having a distinct crest, the nostrils covered by bristly plumes, the outer posterior toe longer than the outer anterior toe, and the tail-feathers concave.

Key to the Species.

- | | |
|---|----------------------------------|
| A. Abdomen and under tail-coverts rufous brown; inner webs of quills rufous | <i>C. rubricollis</i> , p. 494. |
| B. Abdomen and under tail-coverts barred with black and white; inner webs of quills white | <i>C. melanoleucus</i> , p. 495. |

344. *Campephilus rubricollis*.

RED-NECKED WOODPECKER.

Picus rubricollis Bodd. Tabl. Pl. Enl. p. 37, 1783 (Cayenne).

Campephilus rubricollis Cab. in Schomb. Reis. Guian. iii. p. 716, 1848;

Salvin, Ibis, 1886, p. 58 (Bartica Grove, Camacusa, Merumé Mts.);

Quelch, Timehri (2) iv. p. 115, 1890 (Demerara Falls).

Campephilus rubricollis Hargitt, Cat. B. Brit. Mus. xviii. p. 467, 1890 (Bartica Grove); Brabourne & Chubb, B. S. Amer. i. p. 176, no. 1760, 1912.

Adult male. Upper back, wings, and tail black, as is also a patch on sides of breast; inner webs of primary and secondary quills rufous; head, neck all round, and breast red (vermilion); remainder of under surface rufous brown.

Total length 315 mm., culmen 41, wing 174, tail 114, tarsus 36.

We do not know the exact locality, in the Colony, of the male described.

Adult female. Similar to adult male, but differs in having a white patch on fore part of the cheeks, which is surrounded by a narrow black line. The female described was collected at "Cucuie" in October 1898.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Cucuya River (*McConnell collection*); Canuku Mountains (*Schomburgk*); Kamakusa, Bartica, Merumé Mountains (*Whitely*); Demerara Falls (*Quelch*).

Extralimital Range. Cayenne (*Boddaert*), North Brazil, Ecuador.

Habits. Schomburgk states (Reis. Guian. iii. p. 716) that this bird was not very common in British Guiana, though it was fairly numerous in the Canuku Mountains. It was easily distinguished from the other Woodpeckers by its call, which it uttered when climbing the trunk of a tree. Its habits were the same as those of other Woodpeckers. The "Macusis" call it *Zittung*, the "Arekunas" *Zittubera*, and the "Warraus" *Yoho*.

Mr. J. J. Quelch (Timehri (2) iv. p. 115) met with this species at the Demerara Falls, and remarks:—"The loud drumming of the Woodpeckers rung out at all hours of the day—at times so

loud, indeed, were the peckings of the Red-necked Woodpecker (*Campephilus rubricollis*) that it was difficult to imagine their connection."

345. *Campephilus melanoleucus*.

BLACK-AND-WHITE WOODPECKER.

Picus melanoleucus Gmel. Syst. Nat. i. p. 426, 1788 (Surinam).

Dryocopus albirostris Cab. in Schomb. Reis. Guian. iii. p. 716, 1848.

Campephilus melanoleucus Salvin, Ibis, 1886, p. 68 (Bartica Grove);

Beebe, Our Search for a Wilderness, p. 292, 1910 (Aremu).

Campophilus melanoleucus Hargitt, Cat. B. Brit. Mus. xviii. p. 470, 1890 (Takutu River); Brabourne & Chubb, B. S. Amer. i. p. 177, no. 1762, 1912.

Adult male. Lower back, wings, and tail black like the hind-neck, mantle, throat, and fore-neck; a white line on each side of the neck which divides and widens out on the sides of the scapulars, while the narrower portion extends on to the sides of the breast; a double buff spot at the base of the bill; the lower portion of the ear-coverts buffy-white, upper portion of ear-coverts black; entire head and sides of face bright scarlet; under wing-coverts white or buffy-white, as is also the basal portion of the inner webs of the quills above and below; breast, sides of body, abdomen, and under tail-coverts barred with blackish brown and buffy-white.

The male described was collected at Bartica, 1911.

Total length 360 mm., culmen 44, wing 200, tail 124, tarsus 26.

Adult female. Differs from the adult male in having the forehead and middle of the crown black, also by the white cheeks joining the white line on sides of neck. Wing 185 mm.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Bartica, Bonasika River (*McConnell collection*); Bartica, Takutu River (*Whitely*); Aremu River (*Beebe*).

Extradimital Range. Surinam (*Gmelin*), Trinidad, Venezuela, Colombia, Ecuador, Peru, Brazil, Paraguay.

Habits. According to Schomburgk (Reis. Guian. iii. p. 716) the mode of life and habits of this bird are like those of *D. lineatus* (= *Ceophlæus lineatus*, p. 496).

We quote the following note regarding this bird from

Mr. Beebe (Our Search for a Wilderness, p. 312):—"What splendid birds the Woodpeckers are—strong, active, full of vitality and enthusiasm over life. These were big fellows, black above, variegated on shoulders and head with white; thickly barred below and with a long crest of blazing scarlet."

Genus **CEOPHLÆUS** Cab. & Hein.

Ceophlæus Cabanis & Heine, Mus. Hein. iv. p. 85, 1865. Type *C. scapularis* (Vig.).

In this genus the chin-angle is exposed, the outer anterior toe is longer than the outer posterior toe, and the tail is less than two-thirds the length of the wing.

346. *Ceophlæus lineatus*.

LINEATED WOODPECKER.

Picus lineatus Linn. Syst. Nat. 12th ed. i. p. 174, 1766 (Cayenne).

Dryocopus lineatus Cab. in Schomb. Reis. Guian. iii. p. 716, 1848; Salvin, Ibis, 1886, p. 58 (Bartica Grove, Camacusa, Roraima, 3500 ft.); Lloyd Price, Timehri (2) v. p. 66, 1891.

Ceophlæus lineatus Hargitt. Cat. B. Brit. Mus. xviii. p. 508, 1890 (Camacusa, Bartica Grove); Beebe, Our Search for a Wilderness, p. 200, 1910 (Hoorie); Brabourne & Chubb, B. S. Amer. i. p. 177, no. 1770, 1912.

Adult male. Back, wings, and tail black, outer edges of scapular feathers white; a line of white running from the base of the bill down sides of neck and extending on the sides of breast; crown of head and nape, as also the malar patch, bright scarlet; a patch of grey behind the eye; throat white with black shaft-streaks to the feathers; a line of black which joins the malar patch uniting with the black on the fore-neck and chest; remainder of under surface white barred with black; under wing-coverts white, as is also the basal portion of the quill-lining.

The male and female described were collected in Demerara.

Total length 340 mm., culmen 37, wing 185, tail 130, tarsus 30.

Adult female. Similar to the adult male, but differs in the absence of the red malar patch and in having the fore part of the head black instead of scarlet, as in the male. Wing 198 mm.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Demerara (McConnell collection); Mount Roraima, Kamakusa, Bartica (Whitely); Hoorie River (Beebe).

Extralimital Range. Cayenne (Linné), Trinidad, Venezuela, Colombia, Ecuador, Peru, Brazil, Paraguay, Central America.

Habits. According to Schomburgk (Reis. Guian. iii. p. 716) this bird is one of the commonest in British Guiana. Its tapping and hammering are heard by the traveller wherever he goes. The noise is similar to that produced by the strike of an axe and so loud that one can scarcely believe it to be made by a bird. It always flies in pairs. It nests in the holes of trees. The "Warraus" call it *Haehae* and the "Macusis" *Etubarra*.

Mr. Lloyd Price, writing on the nests and eggs of some Guiana birds, remarks (Timebri (2) v. p. 66):—"A large Black-and-White Woodpecker with a scarlet crest, called by the 'Creoles' the Carpenter-bird (*Dryocopus lineatus*) will attract attention. The noise these birds make while searching for insects by tapping the trunk and branches of dry trees is, when first heard, quite startling, and can be noticed a great distance away."

Mr. Beebe (Our Search for a Wilderness, p. 200) writes:—"A splendid Woodpecker—the Guiana Ivory-bill, close kin to our Ivory-bill of the Florida swamps. Imagine a big Woodpecker with dark brown back, wings, and tail, while the long erect crest, head, neck, and breast are bright scarlet, shading into rich rufous on the underparts."

Genus **PICUMNUS** Temm.

Picumnus Temminck, Pl. Col. iv. Livr. 62, 1829. Type *P. minutus* (Linn.).

The members of this genus are very small and have the tail soft, the shafts of the feathers not stiffened, and the nasal aperture concealed by dense bristles.

Key to the Species.

- | | |
|---|---------------------------------|
| A. Under surface black barred with white ... | <i>P. macconnelli</i> , p. 498. |
| B. Under surface dull white with dark brown spots | <i>P. spilogaster</i> , p. 498. |
| C. Under surface greenish yellow barred with dark brown | <i>P. undulatus</i> , p. 499. |

347. *Picumnus macconnelli*.

McCONNELL'S PICULET.

(Plate X. fig. 1.)

Picumnus macconnelli Sharpe, Bull. Brit. Orn. Club, xii. p. 4, 1901 (British Guiana); Brabourne & Chubb, B. S. Amer. i. p. 179, no. 1783, 1912.

Adult male. Back and wings pale earth-brown, some of the feathers tipped and edged with white; tail-feathers black margined with white; fore part of head red, nape black, some of the feathers fringed, and others minutely spotted, with white; under surface white narrowly banded with black.

Total length 98 mm., culmen 12, wing 54, tail 33, tarsus 13.

The description of the male is taken from one of the typical specimens from the Upper Takutu Mountains.

Breeding-season. Unknown.

Nest. Unrecorded.

Eggs. Undescribed.

Range. Confined to British Guiana: Upper Takutu Mountains, Ireng River (*McConnell collection*).

Habits. Unknown.

348. *Picumnus spilogaster*.

SUNDEVALL'S PICULET.

Picumnus spilogaster Sundev. Consp. Av. Picin. p. 100, 1866 (Guiana); Hargitt, Cat. B. Brit. Mus. xviii. p. 532, 1890; Quelch, Timehri (2) v. p. 93, 1891 (Botanic Gardens, Georgetown); Brabourne & Chubb, B. S. Amer. i. p. 179, no. 1784, 1912.

Adult male. Back and wings earth-brown with pale tips and edgings to some of the feathers; tail black, some of the feathers edged with white; head black, the feathers on the fore part tipped with red and on the hinder portion tipped with white; under surface of body dull white, with a tinge of buff on the abdomen, under tail-coverts, and under wing-coverts; throat and fore-neck barred with black, and small ovate spots of black on the breast and sides of the body; inner edges of quills below white.

Total length 97 mm., culmen 12, wing 58, tail 31, tarsus 9.

The description of the male is taken from an example collected on the Warima River.



1. *Picumnus macconnelli*.
McConnell's Piculet.

2 & 3. *Picumnus undulatus* ♂ ♀.
Undulated Piculet.

Adult female. Differs from the adult male in the absence of red on the fore part of the head, which is black with minute spots of white. Wing 54 mm.

The female described was collected on the Ituribisi River.

The young male differs from the adults in having the head uniform dark brown.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Upper Takutu Mountains, Ituribisi River, Supenaam River, Bartica, Bonasika River, Abary River (McConnell collection); Georgetown (Quelch).

Extralimital Range. Confined to Guiana.

Habits. Mr. J. J. Quelch, who observed this bird in Georgetown, remarks (Timehri (2) v. p. 93):—"Thus among the great oronaque trees in the Botanic Gardens, a small Woodpecker (*Picumnus spilogaster*) will almost always be seen, jumping about from branch to branch, and climbing up and around, tapping the bark with their little bills, making the characteristic sound of the Woodpecker's knock, though much fainter than that made by the ordinary members of the group."

349. *Picumnus undulatus*.

UNDULATED PICULET.

(Plate X. figs. 2, 3.)

Picumnus undulatus Hargitt, Ibis, 1889, p. 354 (Roraima); id. Cat. B. Brit. Mus. xviii. p. 543, 1890 (Merumé Mts., Camacusa); Brabourne & Chubb, B. S. Amer. i. p. 180, no. 1799, 1912.

Picumnus minutus (nec Linn.), Cab. in Schomb. Reis. Guian. iii. p. 714, 1848; Salvin, Ibis, 1886, p. 57 (Camacusa, Merumé Mts., Roraima, 3500 to 4000 ft.).

Adult male. Back and wings olive-brown with dark spots and yellowish edgings to the feathers, on some of the lesser upper wing-coverts the edgings are almost white; primary-coverts and quills brown; the innermost secondaries, which are like the back, are edged with yellowish on the outer webs; tail blackish, some of the feathers margined with white or yellowish white; crown of head black, the feathers on the fore part tipped with red, and those on the hinder crown and nape minutely spotted with

white; throat and remainder of the under surface yellowish white barred with dark brown, the bars very narrow on the throat, becoming broader on the breast and abdomen; under wing-coverts dull white.

Total length 88 mm., culmen 7, wing 60, tail 22, tarsus 10.

Adult female. Similar to the adult male and differs only in the absence of the red on the fore part of the head. Wing 57 mm.

The male and female from which the descriptions are taken were collected by Mr. McConnell at Mount Roraima in October 1898.

Breeding-season. Unknown in British Guiana.

Nest. Unrecorded in British Guiana.

Eggs. Undescribed from British Guiana.

Range in British Guiana. Mount Roraima (*McConnell collection*); near the coast (*Schomburgk*).

Extralimital Range. Cayenne.

Habits. Schomburgk mentions (*Reis. Guian.* iii. p. 714) this bird as the smallest species of *Picus* found in British Guiana. It appeared to be common and gregarious near the coast, but prefers its own company in the woods. It also inhabits gardens and plantations, and is a partial or local migrant. Like the larger species of Woodpeckers, it nests in the holes of tree-trunks.

ADDENDA AND CORRIGENDA.

- Page 109, line 21 from the top, *Egialitis* should read *Ægialitis*.
,, 197, line 17 from the top should read—*Habits*. Unrecorded in British Guiana.
,, 202, line 5 from the bottom. Lord Rothschild is of opinion that *Fregata minor* should be replaced by *Fregata magnificus rothschildi* Math.
(For further details and discussions on this form, see Mathews, B. Austr. iv. part 3, p. 280.)
,, 204, line 7 from the top, (Guiana) should read (Jamaica).
,, 206, between lines 7 and 8 from the bottom, add—
KING VULTURE.
,, 213, between lines 11 and 12 from the bottom, add—
AUDUBON'S CARACARA.
,, 213, between lines 19 and 20 from the bottom, add—

Order ACCIPITRIFORMES.

Family FALCONIDÆ.

- ,, 215, between lines 14 and 15 from the top, add—

Key to the Species.

- A. Base of tail white; vent and under tail-coverts black..... *I. ater*, p. 215.
B. Base of tail black; vent and under tail-coverts white..... *I. americana*, p. 216

Page 234, line 15 from the top, *E. erythronotus* should read *B. erythronotus*.

- ,, 265, line 21 from the top, *for* at Mahaicoy *read* on the Mahaicoy River.

ADDENDA AND CORRIGENDA.

Page 295, add—We find on further research that *Strix perlata* Licht. Verz. Doubl. p. 59, 1823, is pre-occupied by *Strix perlata* Vieill. N. Diet. d'Hist. Nat. vii. p. 26, 1816, which is an African bird. Griffith and Pidgeon, however, in Cuvier's Animal Kingdom, Aves, i. p. 75, 1829, proposed *Strix tuidara* for *S. perlata* Licht. (nec Vieill.). The species, therefore, will stand as—

Tyto tuidara (Griff. & Pidg.).

„ 367, between lines 10 and 11 from the bottom, add—

SPOTTED-TAILED NIGHT-HAWK.

„ 397, between lines 19 and 20 from the top, add—
(Plate VIII. figs. 3, 4).

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